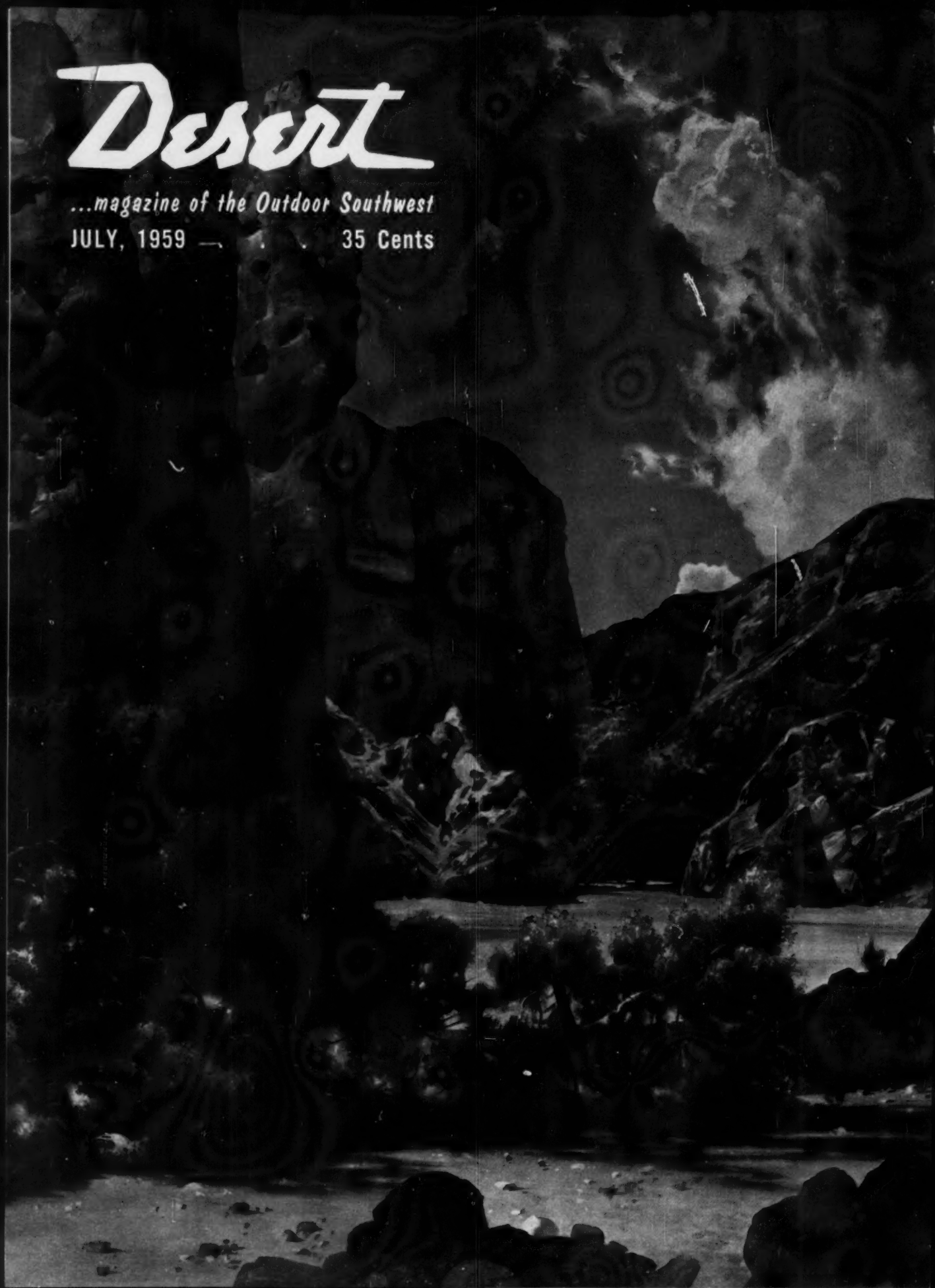
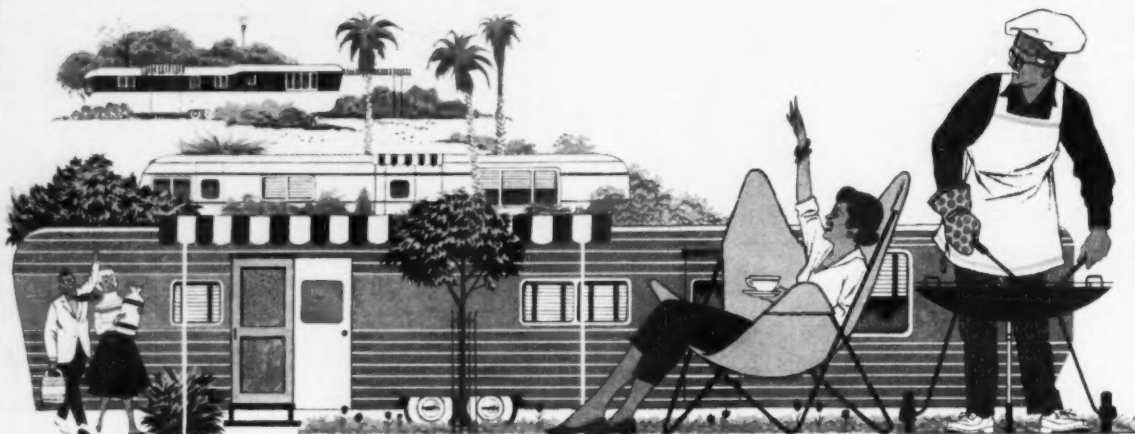


Desert

...magazine of the Outdoor Southwest

JULY, 1959 — 35 Cents





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Volume 22

JULY, 1959

Number 7

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ABOUT THE COVER—

As colorful as R. Brownell McGrew's painting, "Song of the Canyon," is, it is no more vivid than the isolated canyons along the edge of the Colorado Desert as summer approaches. In the foreground a smoke tree sends forth its spectacular blue-purple blossoms; at the head of the canyon, life-giving sunlight filters through the green leaves of an ironwood tree. (See page 43)

Publisher's Notes . . .

Another "first" in *Desert Magazine's* 22 year history—an oil painting for our front cover subject. Last January we had a beautiful stagecoach canvas on our back cover, a painting by Marjorie Reed. This month we have the talents of one artist, Brownell McGrew, on both front and back covers.

Our present plan is to use paintings as cover subjects—either front or back—perhaps four times a year. I would like to have *Desert's* readers write me, expressing their approval or disapproval of this plan.

Our new Travel Guide, appearing for the first time this issue, is designed to lead our readers along some of the more interesting trails of the Southwest. The veteran desert-rats don't need to be told where to go or how to get there; they have their pet paths well in mind. But there are many who are new to the lure and lore of the desertland. The travel tips are custom tailored for the latter.

Readers who may wish to share their favorite trip or week end tour with other members of the *Desert* family are invited to write to the appropriate member of our travel staff, giving information on their suggested Trip-of-the-Month in the Southwest.

Looking forward to Christmas our circulation staff has already prepared mailing pieces that will remind you that *Desert Magazine* is the perfect Yule gift. More than a half million enclosures and envelopes are printed and stored, awaiting the first frost. We are also printing part of the December issue this month. This special insert, which will be the largest color section *Desert* has ever done, has the staff looking forward to Christmas—with the mid-summer temperature dancing on tip-toe around the 111 degree mark here in Palm Desert.

CHARLES E. SHELTON
Publisher

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APPLE VALLEY*



* Tailored for
Informal Living

JACK BENNINGTON WATCHES HIS CHILDREN PLAY IN BACK YARD OF THEIR HOME AT GOLF COURSE'S EDGE.

By EUGENE L. CONROTTO

Apple Valley is a planned, controlled and appreciated desert community. It is a new type desert retreat for those who enjoy the relaxation of open country, yet who want a home town where living standards are high, where the sky is blue, and escapism available.

THE LIVING'S different—on purpose—in the sprawling Mojave Desert community of Apple Valley, California. Two forces—the Apple Valley Building and Development Company that sets the building restrictions over this 15x20 mile area, and the desert itself—are steering the living pace toward an informality and leisureness that has special appeal to youngsters, old folks and those in between.

Take the Robert C. Duffs, late of Santa Cruz, California. The Duffs are horse lovers. When conditions in the coastal community in which they were living became such that people and new homes were blocking their horse trails, the Duffs decided to move to Arizona. They got as far as an

Apple Valley dude ranch—stretching their two-day visit into a six-week stay.

Today the Duffs live in an attractive three-bedroom home in an Apple Valley subdivision "zoned for horses" (one out of five new areas opened for subdivision by the Apple Valley Building and Development Company are "horsey"). The home sits on one and one-eighth acres of Joshua-tree-studded bluff overlooking a green band of cottonwood trees that marks the Mojave River.

Spittin' distance from the sliding glass doors at the rear of the Duff home is a corral for three horses. Written into the Duffs' deed—against the day when the undeveloped parcels in their neighborhood are filled with

homes—is an easement for bridle trails along all the property lines. These trails merge into main "horses only" arteries to the river and other compass points. Within the community limits are 165 miles of such trails.

Apple Valley is still in its 'teens. In 1944 Newt Bass and B. J. Westlund, Long Beach oilmen, came to the high desert with an eye toward starting a cattle ranch. For a variety of reasons—market conditions, labor supply—they abandoned their idea, and the next year put the 9000 acres they had acquired on the open market.

Bass and Westlund soon learned a significant lesson about selling desert living. People, mostly from the congested Los Angeles basin some 100 miles away, wanted their land. These

folks were not the idle rich or fast-buck land speculators — they were working people with a yen to have a desert place even though they could only come to it on week ends.

They reorganized their thinking, came up with an expanded "tailored-for-the-outdoors" community master plan, and in 1946 the sales organization started sales in a trailer, booming a wide-open geographical designation loosely advertised as Apple Valley. The sales campaign to date has grossed \$45,000,000 in new vacant subdivided lots alone, a sharp-focus endorsement of the lure of the desert.

Growing Community

Out of this has come a town of 1000 homes, scores of businesses, and a population of 8000. Apple Valley welcomes an average of 100 new permanent residents a month. In the next seven years the developers foresee 16,000 people here — living in larger than average homes (some of the developed areas within the land company's 22,000-acre holdings require 2000-square-feet of livable floor space under roof) on lots that average an acre in size (minimum lot size: one-third acre).

One of Apple Valley's charms is

the styling of its homes. While most tend toward ranch style, there is far more variety here than in the majority of Southern California's newer communities.

Fences Popular

Many of the homes are encircled with corral-type fences marking off the property line through unspoiled desert. There are no curbs, gutters or street lights—nor, according to one of the land company executives, will there ever be—in the part of Apple Valley which lies beyond the business streets.

Adding to the rural setting is the touch—in most of the homes—known locally as "Apple Valley styling," a successful attempt by the area's home owners to lasso the outdoors and bring it right into the living room. Wide roof overhangs that slope low over patios, rock walls facing exterior walls of the house, planters that start outdoors and end up indoors; open rounded fireplaces that become low room dividers; sliding glass partitions looking out over the rolling desert or verdant back yards—these are peculiar to Apple Valley architecture.

No one knows more about "Apple

Valley architecture" than Jack Bennington, 36, who with his partner, Hal Smith, 37, has built a great many of A.V.'s structures, including a 35-bed-room hospital, post office, land company administration building, country club and two of the community's three elementary schools.

Bennington represents an unseen, but very much felt, Apple Valley ingredient: dynamic spirit. Things are happening here—this is the modern desert where the sons of pioneers are fulfilling the earlier-held dreams.

Bennington and Smith arrived in Apple Valley in 1947, the year after the land company began its sales campaign.

Humble Start

"We came up here with two tool kits and a couple of used cars," explained Bennington. "Opportunity lay all around us—and this thing is just starting."

The Benningtons and their four children (three girls and a boy) and the Smiths and their four children (two girls and two boys) live next door to each other in \$65,000 homes on Tiger Tail road — a circular drive in the heart of the country club's 18-hole

WIDE OVERHANGING ROOFS, WIDE OPEN SPACES TYPIFY APPLE VALLEY.



professional golf course. The 12th fairway is right out their back doors.

Less spectacular, but also in keeping with the Apple Valley story, is the success of Ken and Nancy Duckhorn. Two years ago Ken retired from 20 years service with the Navy.

Western Store

"We were in love with Apple Valley but had to figure out some way to make a living up there," Nancy said. "A Western store was suggested — and here we are!"

With only a "love for horses" for background, the Duckhorns started from scratch. Today they can outfit the entire family *a la* Western — including the horse (saddles, hoof files, blankets, fly spray). Theirs is one of the most complete Western wear stores in the nation. Regular customers come from as far away as Las Vegas, a mighty horse town in itself.

Almost everyone in Apple Valley has made some concession to Western wear. All of the development company's employees, most of those who work in the Apple Valley Inn and the country club, most of the business people and a great many of the townspeople stick to it almost exclusively for day-to-day wear.

Dudes' Choice

The tourist — representing 30 percent of the Duckhorn trade — takes to Western wear like a duck to water. Usually they come in only to buy a shirt. With the shirt you need a string tie. About half of them are satisfied, at this point, to be "half-Western." The other half go for the trousers — and, of course, a belt. The boots come next. Hardest thing to get the dudes to wear is a 10-gallon hat. Average cost of the complete outfit: under \$50.

Hub of the community is the Apple Valley Inn — the big magnet that draws tourists — and potential permanent residents — to Apple Valley. The Inn is not expensive (rooms start at \$8, dinner \$3 to \$5), and it has a Western atmosphere about it (decorating the lobby and dining area walls are large oil canvases of the West's more notorious characters), and a relaxed tempo that smacks of happy times. There's swimming, horseback riding, a putting green (guests also have golfing privileges at the nearby country club), professional entertainment, hay rides, steak fries, hiking, tennis, badminton — or just plain loafing — for Inn patrons.

Climate Question

Climate? Roy Carter, one of the land company's salesmen, has a unique way of answering that question when a prospective buyer needs to be convinced about the high desert's all-year livability.

Roy always includes a trip to the Stoddard Jess Ranch on the southern perimeter of Apple Valley near the river on his customer tours. The Jess Ranch is one of the world's largest turkey and commercial trout producers (200,000 to 250,000 turkeys and 500,000 rainbow trout annually).

Stretching as far as the eye can see toward the purple San Bernardino Mountains are the rows of slat houses — low and sideless triangular affairs — under and around which the birds live. This is the only protection against the elements the birds have — night and day, winter and summer. Climatic conditions have never accounted for the loss of a turkey here.

The Jess Ranch also helps Roy

answer another question potential desertites invariably ask: water. On the bluffs above the turkey empire are the trout lakes — fed by deep well pumps cascading a huge volume of water out of the ground.

Modern Ranch

And the ranch allows Roy an opportunity to describe one of the Southwest's most marvelous economic enterprises. The water in which the trout swim — fully fertilized by the fish — is used to irrigate the long rows of corn in the corridors between the turkeys' slat house rows. When the corn is ripe, the turkeys are turned loose in it, and they eat the plants down to the ground — ear, tassel and stalk. The turkeys pay back the trout by donating their feathers and all unusable parts, after processing, to a two and a half acre "worm farm" — a huge compost area in which worms are raised for fish food.

Roy Carter has been with the Westlund-Bass organization five years now — three of them in Apple Valley. He lives in a modest home in a section of Apple Valley known as Joshua Tree Knolls. Before turning to real estate, Roy had a lifetime of government service behind him.

Roy's Holdings

Now he owns seven homes in Apple Valley (he rents six of them for prices ranging to \$125, unfurnished). He and his fellow salesmen, 18 in number, own a million dollars worth of real estate in Apple Valley, encouraged by the boss to have personal holdings in the community — "you must believe in something before you can sell it."

The Carter home is surrounded by

WESTERN MOTIF IS ENHANCED BY SUCH STRUCTURES AS FORMER SHERIFF OFFICE.



APPLE VALLEY INN GARDEN. ALL-YEAR MOJAVE DESERT RESORT'S MOST POPULAR SEASON IS SUMMER.

NANCY DUCKHORN CAN TOG FAMILY WESTERN STYLE—INCLUDING HORSE.



a variety of plantings — from cottonwood trees grown from suckers taken from the river bed, fruit trees and roses to asparagus and strawberries. It is as informal and pleasant a garden as the desert itself.

"We just stuck 'em in the ground where there was room," explained Roy. "It's a wonderful testimonial to what water can do on the desert." None of the plants are more than two years old and already the cottonwoods (10 in number) are over 15 feet tall.

All-Year Living

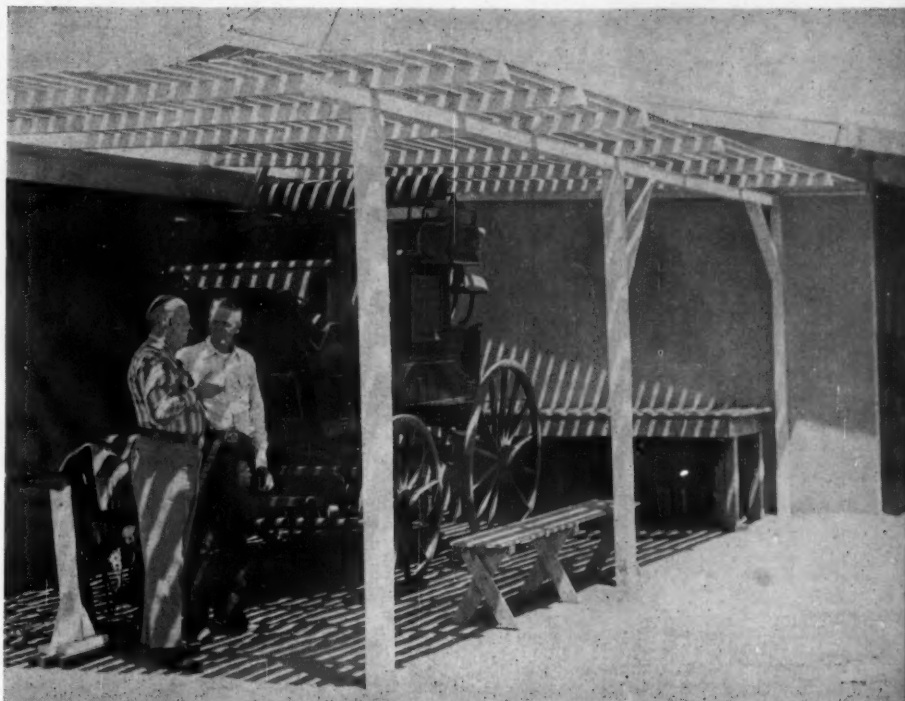
Apple Valley's 3000 foot elevation provides all-year livability. Very few of the 8000 souls here are not permanent, full-time residents. In many ways Apple Valley is a "bedroom town" for Victorville and George Air Force Base.

A not-too-excessive number of Apple Valleyites are retired — or at least they don't stay retired long after moving to the desert.

Dr. Orm Myers provides a case in point. Ill health forced him to move to Apple Valley from Eureka where he was an orthopedic surgeon. When he quit he thought he was doing so for good—but recently he got to feeling so good he re-opened his practice in Apple Valley.

In the center of Apple Valley's 300 square miles is a naked rocky ridge known as Miner's Point. The Inn is located on its northern flank, the country club and golf course wind around its western edge. A step down from the top of Miner's Point is the 1,520,-000 gallon pressure tank that supplies water for the entire valley.

From the top of the point, Apple Valley's story becomes a 360-degree panorama — green alfalfa fields, the



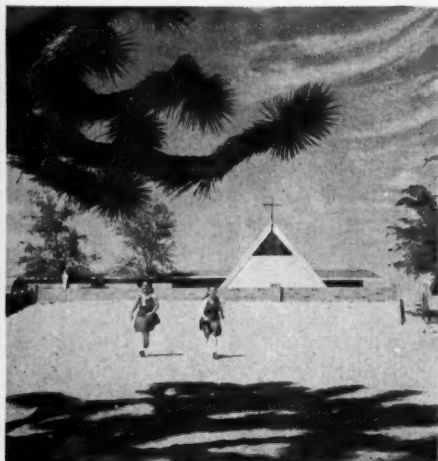
HORSE ENTHUSIAST ROBERT DUFF, RIGHT, SHOWS TO ROY CARTER ONE OF SEVERAL ANTIQUE COACHES HE OWNS. DUFF KEEPS THREE HORSES ON HIS APPLE VALLEY PROPERTY.

heavy growth around the main buildings of a dozen dude ranches in the area, an extremely busy air field with a four-directional landing strip served by Bonanza Air Lines with two flights daily from Los Angeles and Las Vegas (planes taxi to within a stone's throw of the country club), a million grotesque Joshua trees—and hanging like delicious fruit from the asphalt vines winding out in all directions

from the community's 15-mile-long main street are the homes.

Newt Bass is building a mansion atop Miner's Point. Its orange steel girders already dominate the area. When that house is complete and occupied, Bass will have every reason to be proud of what his eye falls upon in the valley below—no matter from which window of the house he may look.—END

TWO STUDENTS OF NEW PAROCHIAL SCHOOL RACE ACROSS PLAYGROUND.



GLASS AND ROCK KEYNOTE ARCHITECTURAL STYLING. CIRCULAR STONEWORK AT LEFT IS BANK'S VAULT.

ROY CARTER HAS A SMALL BUT PRODUCTIVE BERRY PATCH NEAR BACK DOOR.





By CHARLES E. SHELTON

Recognized today as the world's leading authority on rattlesnakes, Laurence Klauber has studied these dangerous reptiles for the past 35 years—as his hobby.



FEW MEN would accept "Mr. Rattlesnake" as a title of honor, and fewer still deserve the accolade. If the mantle were to grace any man's shoulders it must be custom-tailored to fit the healthy six-foot frame of Laurence M. Klauber of San Diego, California.

Dr. Klauber, at 75, is the world's leading authority on the subject of rattlesnakes. Two facts add special interest to his achievement: he is not a herpetologist by profession, and he did not begin a serious study of reptiles until he was 40 years old.

A highly successful engineer, Klauber has served as president and chairman of the board of San Diego's largest public utility, has been on the board of the San Diego Zoo for more than 20 years, belongs to a dozen national scientific societies, carries on a worldwide correspondence with fellow-scientists, finds time to foster many worthy cultural projects in his community, and to play the role of a devoted grandfather.

How did he—an executive of one of America's large business concerns—become the recognized world leader in the disparate study of the rattlesnake?

"It started in the 1920s when the then-young San Diego Zoo had acquired several snakes which were unidentified," Klauber recalls. "Dr. Harry Wegendorf, who was president of the zoo, heard somewhere that I was sort of an amateur snake collector as a youngster so he asked me to label the zoo's snakes. I gladly offered my services, and, as I look back on it, I'm sure I identified all of them incorrectly!

"But I've been working with the zoo ever since, and from that day on my interest in knowing more about reptiles has continued."

Despite his seemingly late start, in three-and-a-half decades Klauber has traveled far in the realm of the rattlesnake. How deeply the herpetological hobby captured him—or vice versa—is revealed by these rough statistics: he has spent uncounted thousands of hours (evenings, week ends and vacations) collecting, handling, classifying and dissecting rattlers; he has accumulated a reptile reference library that is probably one of the finest in the world and would measure more than 150 feet long if placed on one long shelf; he has "milked" the venom from some 5000 rattlesnakes (and

been bitten twice—a fact that he is not proud of); and in the past 30 years has pickled more than 35,000 reptiles in the basement of his lovely home high on a hillside above San Diego Bay (there are only two or three thousand snakes in the basement at one time, all the other preserved specimens going on the storage shelves of the San Diego Museum of Natural History—for future scientific research).

From Klauber's deep interest in the rattlesnake has come a monumental and definitive work: *Rattlesnakes — Their Habits, Life Histories and Influence on Mankind*. It was Klauber's desire to bring together all the pertinent facts that have been written about the rattlesnake, sift fact from myth,

by the pattern and count of the snake's scales.

Before Klauber's 35 years of field and laboratory research appeared in print in 1956 there was no complete paper on the habits and life history of the rattler. Though rattlesnakes, statistically, are a minor menace to man, they are a major subject of interest, far out of proportion to their relative influence. Klauber cites the fact that more people in the state of California die each year from bee-sting than from rattlesnake bite.

Though few people have ever seen a rattler in the wilds, almost anyone can tell you anything you want to know about the serpents—how long they grow, what they eat, what they smell like, where they live, how they

"MR. RATTLESNAKE"



add many important findings of his own, then put his report under one cover. The 1522-page compilation—so weighty that it had to be divided into two volumes—was published in 1956, in richly illustrated form, by the University of California Press.

The book, which belongs in the library of every serious herpetologist, is recognized as the most complete and authoritative documentation ever done on the rattlesnake. The length to which Dr. Klauber went in studying his dangerous darlings, then reporting in minute detail, is evident, for example, in the chapter on the "Rattle." It would be a fair guess that most competent reptile observers would be hard pressed to write more than a dozen paragraphs about the rattler's last inch, but Klauber has gathered enough facts about the buzzer-end of the snake to fill 66 pages!

His chapter on the "Treatment and Prevention of the Bite" is a small book in itself—112 pages.

Perhaps Klauber's most important contribution to the study of the rattlesnake was his application of mathematical statistics to the classification of the rattlers. As a result of his careful analysis, it is now possible to make positive identification of any rattler

kill, how they hypnotize their prey, how they roll into hoops and chase black Model-T Fords . . . in fact, the rattlesnake probably carries on its scaly back more weight of misinformation and folklore than any other animal that ever rode in Noah's Ark.

Klauber recognized that as long as there are rattlesnakes and men to talk about them, there will be more fiction than fact surrounding the rattler. But this did not deter him from digging out all the observations, some accurate and some inaccurate, that he could gather. Through the past three decades he has corresponded with more than 5000 observers throughout the world and has read another 10,000 or more scientific papers, newspaper accounts, magazine articles, and book references about the rattler.

His book is liberally seasoned with comments from such diverse observers as forest rangers, ranchers, snake-farm operators, amateur and professional herpetologists, doctors, fishermen, and photographers.

"Snakes can travel as fast as a horse when they set their mind to it," wrote one volunteer correspondent. Several experiments made by a competent herpetologist, Mosauer, using a stopwatch, indicated that the top straight-

away speed of a rattler is about three miles an hour. "I know they seem to go much faster," Klauber admits, "But the wavy motion of the snake's body may create an impression of higher speed than actually exists."

"We cut off a rattler's head and next morning the head bit our dog," someone wrote. Klauber decapitated several rattlers to study this point. At regular intervals of several minutes he touched the heads with a pencil. He found that the jaws can move and snap closed up to half an hour after the head was severed from the snake's body. After the head of one sidewinder was cut off, its heart continued to beat for 59 hours!

He has a file of letters from folks who swear one touch of rattlesnake venom on the lips is fatal. Klauber disproved this by tasting venom (it has a slight taste, astringent at first, and then turning sweetish when held on the tongue).

He told me that most of his collecting hours have been spent on the desert. He estimates he has traveled more than 100,000 miles on desert roads, looking for snakes.

"The desert is the most productive area for the collecting of snakes, much better than brushland or woodland. Not that there are more snakes per square mile in the desert—actually the snake population is probably thinner in the desert than it is in brush country—but there are fewer places in the desert for a snake to find concealment.

"Years ago I learned that I could

collect about three times as many snakes in the desert for the same output of time—and remember that I did my field collecting mostly on week ends—as I could in the foothills or brush-covered valleys. And I also learned that six or seven weeks during the spring would provide more snakes for my collecting sacks than the rest of the year put together.

"That's something to impress on your readers," Klauber warned. In the desert areas and elsewhere rattlers are most active in the first warm weeks of spring. Certainly they may move about all year long, but it is in March and April that they are most likely to be encountered. "May I add another warning for desert campers?" he asked. "Tell them to wear boots and protective clothing that covers their legs if they are going to wander at night—even in the area of the campfire—in the desert during the spring months."

As a snake collector, Klauber also learned that the night hours are far more productive than daylight hours.

"My best success in gathering rattlesnakes came when I found I could collect dead or injured snakes on desert roads after the reptiles had been run over by cars. That was 20 or more years ago. I wouldn't advise anyone to do his snake hunting today along the busy desert highways. Now the traffic is far more dangerous than any rattler," he remarked with a smile.

Should the desert traveler destroy, without question, every rattlesnake he may encounter? Klauber says that



LAURENCE M. KLAUBER

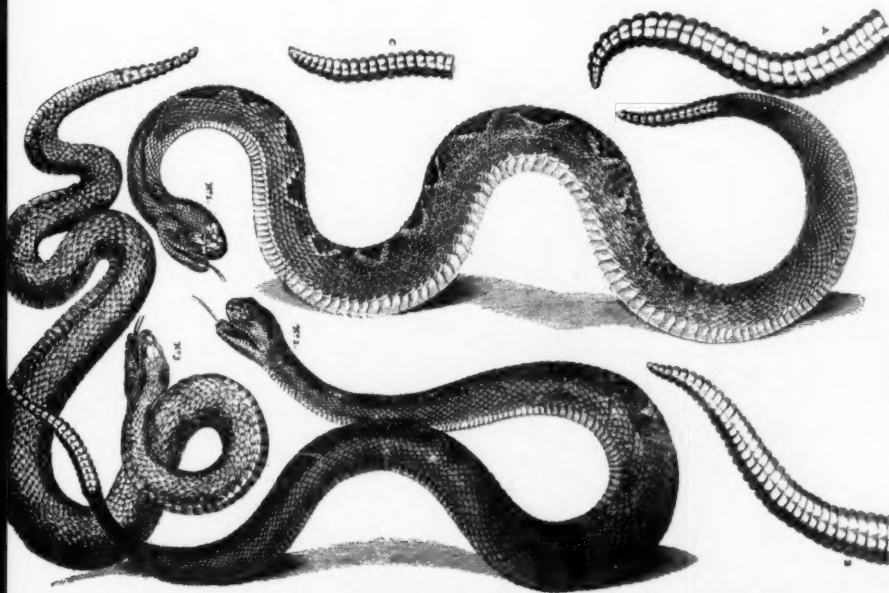
any rattler found near a human habitation poses a threat to man, and therefore, reasonably, may be killed. "Rattlers are also a threat to livestock and barnyard animals," he added. "But when the camper finds a rattler far out in the desert, far from human traffic, then the person himself must decide whether he wants to kill."

Klauber believes rattlesnakes in far-away backlands deserve mercy. "The balance of Nature includes the rattlesnake," he points out.

The average camper, using normal caution, has an excellent chance of going through life without ever seeing a rattler in the wild. Klauber states: "It is almost a universal fact that the rattlesnake will do all that it reasonably can to avoid man. The rattler's first wish is to get away from anything as large and as potentially dangerous as man. If the snake strikes, it is because it is cornered or frightened for its own safety."

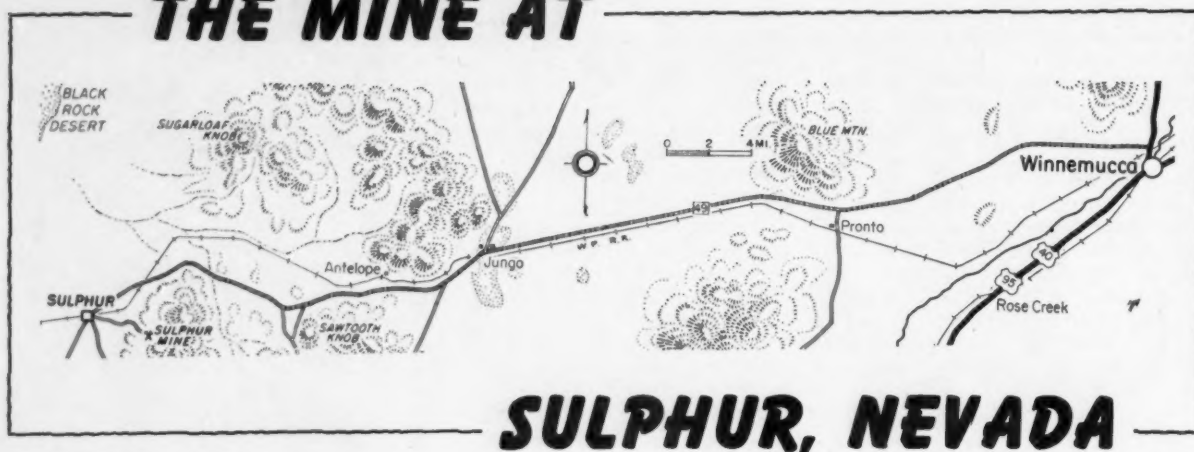
Klauber is a firm believer — and preacher — that knowledge of the rattlesnake's habits and respect for its strike are the sensible answers to ignorance and fear.

At 75, Dr. Klauber still takes an active interest in snakes, still pickles a few occasionally in his basement, still corresponds with herpetologists all over the world, and still finds time to converse with enthusiasm with one who would write an article about him, happily explaining his hobby and his monument—the rattlesnake.—END



RATTLESNAKES WITH LONG TAPERING RATTLES APPEARED IN BOOK WRITTEN IN 1735 BY SEBA.

THE MINE AT



By NELL MURBARGER

NO ONE knows who discovered the great sulphur deposit between Rabbit-hole Spring and the southerly fringe of Nevada's Black Rock Desert. Neither is it known in what year this discovery was made. Possibly a wandering Indian or an early-day traveler on the nearby Applegate-Lassen Trail was first to finger the pale-yellow evil-smelling earth.

When the mining men came they filed claims, and by 1875 brimstone was being produced here at a lively rate. During the following years this vast sulphur bed at the north end of the Kamma Mountains was worked by many men and many corporations — by Chinese miners and whites. Today the mine is still going strong and appears to be inexhaustible.

Nevada State Route 49 runs west-by-south from Winnemucca to Sulphur—

a distance of 57 miles. Although in time this may be part of the projected "Winnemucca-to-the-Sea" paved highway, at present it is only a graded desert road, corrugated and dusty through the dry months and occasionally blocked by snow in winter. It crosses the Antelope Range and passes Sawtooth Knob on its approach to the little camp of Sulphur.

At first glance Sulphur looked just as I remembered it from a previous visit. The vast sun-bleached playa of Black Rock Desert spread northward to infinity; dusty yellow houses of railroad section workers huddled near the Western Pacific Railroad tracks; cabins built of discarded railroad ties and other odds and ends rubbed elbows with a few dwellings of better quality. There was the same old mill and what could have been the same stockpile of yellow sulphur rock, the

same little schoolhouse occupied only when a teacher and pupils in sufficient number are available, and the same false-front vacant buildings which formerly housed the Zeek store and a fourth-class postoffice — discontinued six years ago.

As I drew closer I saw changes. Not that a mining boom was underway, but the camp looked cleaner. A landing strip had been cleared; a weather-beaten cluster of old chicken houses and horse barns had been torn down; a trailer park filled with house trailers had come into being; and there were several new buildings painted red and white, and one huge structure sided and roofed with metal sheeting shone like a polished dime.

Henry C. Crofoot of Ukiah, California, owns the sulphur mine. He is a big hearty happy-seeming man. In addition to his mining properties he has important timber holdings in the California redwoods and in Colorado, as well as farm property in various sections of the country.

"Been working like a Trojan!" said this 84-year-old man by way of greeting. "My crew and I built that new warehouse yonder," Crofoot indicated the silver-colored building I had noticed upon entering town. "It'll hold 52 carloads of sulphur—about 40,000 hundred-pound bags. We built a 20-by-40-foot commissary, too—and a laundry room."



PETERSON MILL WAS BUILT IN 1947, ABANDONED AFTER FIVE YEARS OF SERVICE.

After an inspection tour of the new buildings and his big house trailer, which provides all the comforts of home, including a refrigerator and electric lights supplied by the camp's power plant, Crofoot drove me to the sulphur pits.

About two miles east of camp—near the point where we left the flat to turn south toward the foothills and the pits—we stopped briefly at the silent hulk of the sulphur mill built by the late William Peterson in 1947. Peterson bought the mine in '34 and sold it to Crofoot in '52. From there we followed a winding ravine to the nearest of several pits currently being worked.

Unique Operation

These sulphur diggings in the Kamma Mountains are like no other mines I have seen. Some of the pits are very large. The Peterson Pit, for example, is more than a quarter-mile long, and has been worked to a depth of 100 feet. Drilling tests show the sulphur continues at least 300 feet below the present level of operation.

From the bottom of each pit to the point where its rim meets the blue of the desert sky, there is a fascinating and complex mingling of color, but the color of the ore has little significance, Crofoot explained. Whether white or pink or yellow, it is all good commercial-grade sulphur and there is virtually no waste rock. At present the entire yield of the mine is sold for agricultural use.

Sulphur is one of our most important fertilizers and soil conditioners. Today's progressive truck farmer and hay and grain grower is fully aware of the beneficial action of sulphur. Farmers use from 300 to 700 pounds of this mineral per acre on their fields.

Packed in Bags

Both mining and milling processes are relatively simple. After drilling and blasting, the sulphur ore is loaded on trucks and hauled downgrade to the mill where it is pulverized and automatically fed into stout 100-pound paper bags. Then to waiting freight cars, each of which holds 40 tons—an average day's run.

While the entire production of the mine is now sold as agricultural sulphur—at \$17.50 per ton—plans are afoot to install a retort by which the sulphur may be refined to 99-plus percent purity, thereby enabling its sale for medical and technical use.

Only a few weeks before my visit,

an important new discovery was made at the mine. "Waste rock" from a certain digging was tested and found to be rich in mercury.

Fifty tons of the material yielded three flasks of quicksilver—valued at \$276 each. Another two flasks were lost due to milling deficiencies, and the 50-ton load also produced two tons of pure sulphur.

Elsewhere on Crofoot's claims at

dwelling had five rooms, all nicely wall-papered at one time. Still flourishing in the front yard are two 30-foot ponderosa pines.

At the western edge of camp the ground dropped away abruptly to the rim of a yawning sulphur pit strewn with the heavy timbers and rust-corroded machinery of an old mill, and spotted over the surrounding hills are dark yawning mouths of many old



HENRY CROFOOT, LEFT, AND THE STRICKLANDS IN FRONT OF THEIR FULLY-EQUIPPED TRAILER.

Sulphur is a five-inch vein of pure alum. "If you touch a piece of it to your tongue, you'll pucker terribly," he said. There are also deposits of long-fiber asbestos and several types of spar.

Shortly after sundown mine superintendent G. W. Strickland and his wife, Sarah Nell, returned from a one-day fishing trip with their limit of fine big rainbows. That night we enjoyed a splendid trout supper at an outside table under the stars.

Next day "Strick" and his son, Russell, took me up a steep rutted trail to an old sulphur mining ghost town several miles back in the hills.

There are 15 buildings here, mostly of wooden frame construction with corrugated tin roofs. The "best"

tunnels. The sulphur is hard enough so that timbering underground workings usually is not necessary. Even tunnels driven many years ago still stand firm. Many of these old drifts were run by Chinese miners, and we examined stone walls built during the Chinese period of occupation.

Rover's "Fame"

J. W. Rover, a 43-year-old native of New York, was one of the first locators on this deposit, but his main claim to fame came from murdering his mine superintendent, I. N. Sharp, in April, 1875. Rover was the first man legally executed in Washoe County. (Although the crime was committed in Humboldt County, Rover's execution took place at Reno, Feb. 19, 1878.)

Theodore Hale purchased half-interest in the mine in May, 1875, and the following month laid out an ambitious new townsite to which he gave the significant name, Inferno.

Hale and his partners used a dozen

They're scooping riches out of the ground at this old Western mining camp—and the vast sulphur deposit here gives every indication of being without end.

large freight teams to haul sulphur to Humboldt House, then a station on the Central Pacific Railroad about 40 miles southwest of Winnemucca. The company placed on display at the station a block of pure sulphur weighing over 700 pounds, ultimately exhibited at the Centennial Exposition in Philadelphia.

Within another five years Hale's outfit was refining more than 11,000 pounds of sulphur daily, "and as soon as new machinery is in place they will be able to refine 22,000 pounds every 12 hours," reported the *Silver State* newspaper on April 28, 1880. That summer fire broke out in an abandoned portion of the mine and the portal of the tunnel then being worked was caved in to contain the fire.

Quite a Sight

"Those who have seen the blazing brimstone at night say it is a grand spectacle," remarked the *Silver State* on June 30. "The blue flames shoot up some distance, and the smoke is dense . . . If Bob Ingersoll could be prevailed upon to go there and inhale the sulphurous fumes for a short time he would never again deny the existence of a hell."

Production of mine and mill went forward with the regularity of the tides. Freighter Alex Wise added more mule teams and more wagons and drivers, and still the stockpile of lemon-colored ore continued to mount, until in September, 1882, the *Silver State* noted that owners of the great mine in the Kammas "expect to ship 1500 tons of refined sulphur during the next two months."

"If there is a man, woman or child within 1000 miles of here troubled with the itch, let them come to Inferno," proclaimed Theodore Hale in the *Silver State*. "If they are not cured in a week there is no hope for them this side of Lucifer's regions."

Demand Increases

During the past 50 years the sulphur requirements of the world have increased greatly with the widespread growth of the chemical industry, and, according to findings of the President's Materials Policy Commission, our annual domestic demand for sulphur, by 1975, will be in the neighborhood of 10,000,000 tons.

When that time comes, the mine at Sulphur will be a century old—and I haven't a doubt but that it will still be going its quiet, unpretentious way, still providing jobs for miners and millmen and railroaders, and still contributing its share to our nation's greatness.—

END

PHOTO HINTS

by Bob Riddell



Capture the Sunset . . .

Sunsets present a great challenge to the picturemaker, but the results can be most rewarding.

Luck and perseverance, in equal portion, play a big part. How many times have I raced to a spot only to find the clouds weren't just right—either too low on the horizon, or had blown away entirely.

Fortuitously, an occasional spectacular sunset is caught from the highway. But most photographers spend hours searching for the location where mountains, saguaro cactus or other growth make the best silhouette against the setting sun. A pre-chosen location assures time to focus by daylight. Be sure your camera angle allows the main subject-matter to be clearly defined against the sky, as the ground area should go black in sunset silhouettes. Your sky should take up three-quarters of the picture.

The best sunsets in the desert country occur during the summer months when there are thunderheads hovering overhead.

There is no tight formula for a sunset shot, as the light varies. I take a basic meter reading, then set the camera lens for an average between the lightest and darkest area. If the sun is too bright to look into with the naked eye it is too soon to take the picture. The trick is to get the scene before the sun sets too low, but with enough rays to silhouette the picture area.

A good tip is to bracket exposures, first try a stop a half over, next a stop one-half an exposure under normal lens opening, then one stop over and under. Black and white film has a lot of latitude. Color has less. Slight under-exposure on color film can produce a brilliant red sunset, while slight over-exposure emphasizes the golds and yellows.

Data on photo above: I snapped this Arizona sunset scene the second after the sun sank behind the Tucson Mountains. Camera: 4x5 Speed Graphic, five-inch f1lex lens, yellow filter. Film: Super XX. Exposure: 1/25 second at f. 11.

the best in Your Monthly Guide to Southwest Travel

(See Following Page)

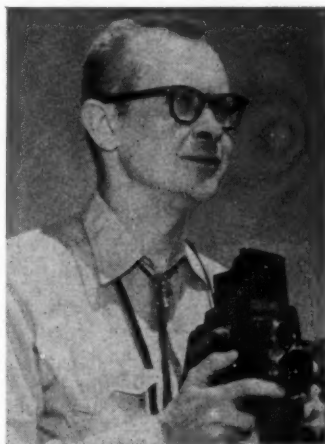
THE FOUR people pictured here are now in your employ. They have divided the Desert Southwest between them, and each month they will give you special travel reports on their respective areas. Their suggestions will lead you to the familiar scenic areas and community events you have always wanted to visit—and revisit—and to the unfamiliar back country expanses seldom called on by the tourist.

Arizona:

In seven years of free-lance writing, Tom Lesure of Phoenix has sold nearly 500 articles to about 20 magazines and newspapers. Most of these pieces have been on travel subjects. Add to this the fact that Tom has had six travel books published in the past three years, and Lesure comes with excellent qualifications to be your Arizona travel guide.

Tom was born in Lawrence, Massachusetts, 36 years ago. He graduated from Boston University in 1945 and went into radio news work and ad copy writing before turning free-lance. He is currently working on two books, *Pacific, U.S.A.* and *The Grand Tour of Europe*, both slated for January, 1960, publication.

Tom and wife, Nancy Carol, have five children — three boys and two girls ranging from one to nine years of age.



TOM LESURE

Southeastern California:

Southwest flora, history and travel, many-faceted subjects, are Lucile Weight's special interests. In the historical avenue, it isn't "relics" or "antiques" or "ghost towns" as such that have appeal for her—these are but symbols of a life and spirit that Lucile has a special fondness for.

Lucile was on *Desert Magazine's* early staff. During the war, when editor Randall Henderson was overseas, Lucile was acting editor of *Desert*. At present she and her writer husband, Harold, reside at Twentynine Palms. The Weights have covered thousands of miles of Southwestern trails, keeping detailed logs, documenting many eyewitness accounts of fast fading his-



LUCILE WEIGHT

tory by means of tape recorded interviews with old-timers; gleaning forgotten history from old manuscripts, diaries and newspapers.

New Mexico:

W. Thetford "Ted" LeViness has lived in Santa Fe for 20 years. He is a regular visitor to the Indian pueblos and rural villages in New Mexico. Ted was born in Baltimore in 1913, and holds an M.A. in English Literature from Columbia University.

Ted has been a librarian at the State Capitol in Santa Fe since 1943, but he spends all his week ends, holidays and vacations writing, traveling and marketing his ideas. He is a special correspondent for the *New York Times*, the *Denver Post* and sev-



W. THETFORD LeVINESS

eral other big-city newspapers. His writings have appeared in several national and regional magazines.

Nevada and Southern Utah:

Peggy Trego lives in Unionville (population 10), Nevada—25 miles from the nearest major highway and 46 miles from the nearest incorporated town.

She was born in Baltimore and "grew up on the Overland Limited between Maryland and California." Her parents gave her a thorough outdoor training—beginning at age two when the family first camped together on the Coast Range near their Palo Alto home.

After graduating from the University of California, Peggy held various journalistic jobs, finally ended up with the *Nevada State Journal* in Reno. At the time of her marriage, her husband was city editor of that newspaper.



PEGGY TREGO

Desert's July Travel Fare:



By LUCILE WEIGHT
P.O. Drawer 758, Twentynine Palms, Calif.

By THOMAS B. LESURE
6120 N. 18th St., Phoenix



MONUMENT ADMINISTRATION BUILDING IS LOCATED AT 29 PALMS OASIS.

STRANGE AS IT sounds, the Southern California desert offers summer play spots, too. The "elevated island" of Joshua Tree National Monument, astride San Bernardino-Riverside counties—150 miles east of Los Angeles and much closer for many thousands of Southern Californians—has campsites at over 4000 feet and riding and hiking area at 5-6000 feet.

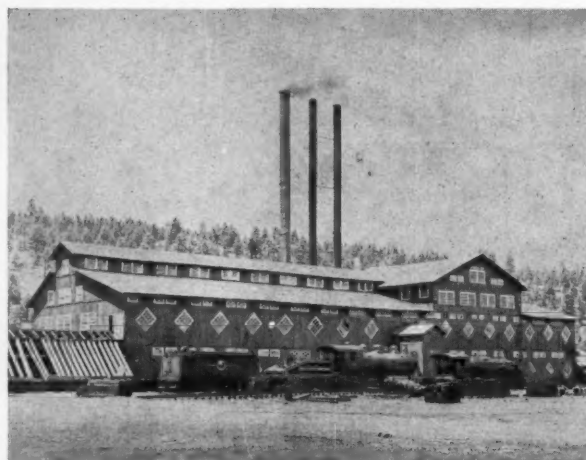
Camp and picnic sites are among imposing granite formations, many shaded by pinyons and junipers, and some oaks. Choose your site elevation according to temperature: Hidden Valley, 4200 feet; Jumbo Rocks, 4400; White Tank, 3800; Belle, 3800; Cottonwood, 3000; Indian Cove, 3200; Sheep Pass, 4500. The latter is for groups only, with reservation made by writing Monument headquarters, Twentynine Palms. Ryan Camp, 4300 feet, is overnight stop on the 30-mile Riding and Hiking Trail (horses at Burnt Mt. Dude Ranch near trail start in east Yucca Valley, and at Terry Terhune's Stables, Twentynine Palms, near trail end.)

You must take water and firewood when visiting Joshua. Only Cottonwood has water. If you are not equipped for camping, there are over 40 air-conditioned motels in Twentynine Palms, many in other High Desert communities west to Morongo Valley.

Traces of the area's fascinating history remain: caves where Indians lived (artifacts exhibited at Visitor Center, Twentynine Palms); check-dams built by early cattlemen; shafts and tunnels from mining days which started in 1870s.

(Continued on page 16)

ONE OF THE nicest times of the year to vacation in the mountain-forest wonderland of Flagstaff—where on the Fourth of July just 83 years ago frontiersmen hoisted a huge pine flagpole and gave the community its name—is during July and August. With a host of attractive events, the town comes more alive than ever, and the "local color" of trading Hopis and Navajos, booted lumberjacks and Stetson-topped cowhands seems even more pronounced.



LUMBER MILL IN FLAGSTAFF WHERE BUSY LUMBER INDUSTRY IS KING.

Appropriately, July 4th remains the king-pin for special activities—but the old pioneer celebration has come a long way. It's organized and big-time. Luckily, that doesn't affect its authenticity. Too, the Indians have taken it over. Some 10,000 of them—from more than 20 tribes—gather in a real Indian encampment for the annual All-Indian Pow-Wow which features day-time parades and rodeos, and night-time dances highlighting intricate-stepped, haunting and dramatic ceremonies of their ancestors. Next to witnessing ceremonials on the reservations, the Pow-Wow is your best bet for meeting the lore of the Old West.

Complimenting the Pow-Wow is the Museum of Northern Arizona, set on the edge of a small, pine-girt gorge and easily reached by a three-mile drive out Fort Valley Road. A showplace for the region's anthropology, natural sciences and archeology, and its usual interest is heightened by the Hopi Craftsmen Exhibit. Hopi men and women, attired in traditional tribal garb, demonstrate weaving, Katchina doll carving, making of pottery and basketry and

(Continued on page 16)

✓ Joshua Tree National Monument

✓ Flagstaff High Country

✓ Mescalero Apache Ceremonial

✓ Back Road to Virginia City



By W. THETFORD LeVINESS
P.O. Box 155, Santa Fe

By PEGGY TREGO
Unionville, via Imlay, Nev.

THE "DANCE of the mountain men" is the proper name for it, but even anthropologists have long dubbed it the "crown dance." Nowadays it's known throughout the Southwest by a complete misnomer, the "devil dance."

Whatever it's called, it's the featured attraction at the four-day encampment of the Mescalero Apache Indians, held every year in early July. Mescalero—agency town, postoffice, and scene of the the annual get-together—is on U.S. 70 in southern New Mexico, high in the Sacramento Mountains and 29 miles northeast of Alamogordo. The dates this year are July 2-5.

Essentially, the pow-wow is a "coming out party" for debutantes of the tribe. There is baseball each morning, rodeo each afternoon, and ceremonial dancing each night. The all-male "devil dance" is performed around a huge bonfire, while the girls who are "coming out" do a "maiden dance" in a near-by tepee. (This is, incidentally, one of



AFTER THE CROWN DANCE, VISITORS JOIN APACHES FOR ROUND DANCE.

the last surviving maturation rites among North American Indians.) Later, both sexes give a "round dance" which anyone may join. Visitors from far-away places often do—and then write post cards back home: "I danced with the Indians in New Mexico . . ."

The "devil dance" is one of the most spirited and spectacular you will see anywhere. Marked by hopping steps and quick gyrations, a male chorus accompanies, and there's an improvised drum—a cow-hide stretched across two planks. The headdress, or "crown," is wider than the

(Continued on page 16)

THE WELCOME MAT is out! You are invited to Virginia City for its summer-long centennial celebration. Most of the folks who visit the Queen of the Comstock will arrive by paved highway; a very, very few will travel the historic winding path of the old Virginia and Truckee Railroad, for it isn't widely known that some segments of the original roadbed are improved for motor-ing.

You'll find it a fascinating experience to ride over part of a route that was an engineering wonder of the world only 90 years ago. One portion especially shouldn't be missed—the 11-mile loop through Carson River Canyon from U.S. 50.

The loop begins about four miles east of Carson City where a small sign points to Brunswick Canyon, and a dirt road heads south toward the line of trees along the river. The entire area is heavy with history. Near the turnoff, crowning a low hill, is old Empire City's cemetery—all that remains of Nevada's "seaport town" where logs floating down-river from the Sierras were caught and processed for Comstock mines. At the junction of road and river-bank is the first remnant of a series of historic quartz mills, dating from the 1860s, which are scattered throughout the canyon. Broken walls and a giant wooden power wheel mark the Morgan Mill site.

The V&T main line takes over from here eastward, keeping to river level and soon passing a remnant of the Brunswick Mill power dam which ripples the stream just west of the mill's massive stone abutments. The canyon

(Continued on page 17)



B STREET IN HEART OF VIRGINIA CITY. PHOTOGRAPH BY JOSEF MUENCH.

California

(Continued
from page 14)

Bird, animal and plant life have attracted many scientists and students. Birds are best observed at Cottonwood Springs and at the Oasis, Twentynine Palms. You may catch glimpses of bighorn sheep, mule deer, coyote, cougar, badger, desert fox and many rodents; also desert tortoise, chuckawalla and scaly lizard. Rattlesnakes are occasional, so take care around bushes or rocks and in sandy areas (even the rattlesnakes are protected in the Monument).

The flora is especially rich, many of the plants having furnished former Indian inhabitants food and other supplies. Most noticeable plant is the Joshua Tree, giant lily for which the Monument is named. This and the Mojave yucca bloom in April, but their large capsule fruits persist for a long time. Nolina, with a tall stalk ending in a feathery plume of tiny cream flowers, may have bloomed in May, but the "everlasting" flowers remain through summer.

Most of the summer blooming species will be found not along main roads as are spring annuals, but among shrubs, granite boulders and in washes. These include scarlet-tubed California fuchsia, aromatic lavender rock pennyroyal, apricot mallow, golden viguiera, rock lotus, lavender mojave aster, paintbrush, desert plume and desert rock goldenbush, a glossy-leaved small shrub often clinging to cracks in granite. Also due to bloom is chilopsis or desert willow, with orchid-like flowers, and smoke tree. While scant rainfall has prevented 1959 being a "good" flower year, some flowers nearly always can be found at various elevations.

You can see the native fan palm (*Washingtonia filifera*) at Twentynine Palm oasis, 49 Palms oasis, Cottonwood Springs and Lost Palms Canyon. Cactus includes bigelow and silver cholla, pancake, pencil, mojave mound, strawberry, beavertail, dead, grizzly bear, cottontops, barrel and several mammillarias. Unusual stand of bigelow cholla is in Pinto Basin, just above the Ocotillo Garden.

Information and publications are available at Oasis headquarters, Twentynine Palms, open every day.

The half-million acre Monument can be reached from the west by Twentynine Palms Highway, with entrances from Joshua Tree or the main entrance at Twentynine Palms; from the south at Cottonwood Springs turnoff from Highways 60-70; from the east via Baseline Highway (turnoff between Rice and Desert Center); and from Barstow-Victorville-Hesperia areas via Old Woman Springs Road.

Arizona

(Continued
from page 14)

baking *piki*, the paper-thin Hopi "bread." You can purchase finely-made handicrafts at much more tempting prices than normally found in highway or city shops.

Should you miss the Fourth of July observance, the Museum has other special events worth seeing. They include The Navajo Craftsmen Exhibit, July 26-Aug. 2; a display of etchings by G. E. Burr, Aug. 15-20; and Shonto—depicting life and its manifold aspects in a modern Navajo community, Oct. 4-Nov. 25.

Other Flagstaff events are: the Oberammergau Passion Play, through Aug. 30 (except at Pow-Wow time); Sheriff's Posse Rodeo, July 25; and the Coconino County Fair, Sept. 5-7. Or you might make a sawmill tour, or visit the Lowell Observatory (where the planet, Pluto, was discovered) by contacting the Chamber of Commerce.

The extras are a treat, of course, but fortunately "Flag" doesn't have to rely on man-made attractions to stimulate

tourists. And it's better that way. After all, Nature has been around a lot longer than humans and has better profited by her experience. In fact, almost everywhere you go, there's beauty, sometimes rough-cut but more often exquisite.

Southward—less than a half hour away from "Flag"—lies winsome Oak Creek Canyon where a murmuring clear-water creek has carved a grandiose gorge that opens into a massive, red-rock amphitheater at Sedona. It's over crowded in summer—people know a good place when they find it—and trout fishing is spotty. But pine-crowned campsites (several of which have been up-graded for the season), rustic guest lodges, restful inspiring scenery, and isolated spots like West Oak Creek Natural Area (where angling is *really* good because the average traveler won't take time to hike to it) more than compensate. Need more? You could inspect the modernistic Chapel of the Holy Cross built on flaming rock formations, or the Meteorite Museum in Sedona where visitors from outer space are a reality.

A bit farther on—around the Verde Valley—you'll find Tuzigoot National Monument with its citadel-type prehistoric Indian ruins, the cameo-like cliff dwelling of Montezuma Castle, old Fort Verde where troopers tried to curb the Apache menace, and the "sliding ghost city" of Jerome.

A pleasant drive southeast of Flagstaff runs to Walnut Canyon National Monument where ancient cliff dwellings are hidden in a horseshoe-shaped gorge. Northeast of town stands Sunset Crater, rearing its rose-tinted cone 1000 feet above the jagged lava beds, perpetual ice caves and fumeroles of the national monument section. And, just a step away, so to speak, is Wupatki National Monument with its brick-colored "Tall House," ceremonial ball court and 800 other ruins inhabited more than 700 years ago.

This will get you started if you haven't been to "Flag" before. If you have, there's no need for me to tell you how delightful it is to linger. Frankly, I have no suggestions on how to tear yourself away—unless you have stronger will power than I have, or the boss is likely to start a private-eye search because you're missing.

New Mexico

(Continued
from page 15)

shoulder span and more than two feet high; other details of costume include masks, buckskin shirts with long fringes, plaid shawls, and boots turned up at the toe. The dancers decorate their legs with spots, stripes, and zigzags of red, yellow and white. Teams of eight or 10 take turns performing; the ceremony lasts several hours. Often two or more teams will dance at the same time, spreading out at intervals from the fire like the spokes of a wheel.

Visitors may enter the ceremonial tepee—as many as can crowd in. The "maiden dance" is graceful, rhythmic—full of hip and arm movements with little space for directional motion. At dawn of the last morning there is a race in which Mescalero boys chase the girls who have now prepared themselves for marriage. In the old days, girls caught were considered married on the spot. Today, good schools and job opportunities lure Indians away from such binding traditions.

The Mescalero Apache reservation has many campsites, and you are welcome to use them. The tribe operates a few guest cabins and a restaurant; other accommodations are available at Ruidoso, Tularosa, and Alamogordo. If you visit the encampment, you'll be within an hour's drive of several other points of interest in southern New Mexico: Lincoln—town where Billy the Kid made his famous jail break in 1881, is on U.S. 370 to the north and east; there's a solar observatory, open to the public on Sundays, in the Sacramentos near Cloudcroft; and White Sands National

Monument is on U.S. 70 the other side of Alamogordo.

On July 25-26, Indians of Santa Clara Pueblo will hold their annual Puye Ceremonials. Puye is the ancestral home of these people, 15 miles from their present village; it has been excavated and partially restored. Abandoned before the Spaniards settled the region, its cliff dwellings and surface ruins yield evidence of a high prehistoric culture—and no European influence. Many kinds of pueblo dances are given at the ceremonials, some in costumes so old they are believed to have been used when Puye was inhabited. Santa Clarans own the old site, and charge a fee at ceremonial time for parking and guide service. Puye is off State Road 4 not far from the atom city, Los Alamos. It is also within commuting distance of Taos, Santa Fe, and Albuquerque.

Two more of New Mexico's biggest Indian fiestas take place in July—at Cochiti on the 14th, and Santa Ana on the 26th. There is a day-long "corn dance" with each fiesta. Cochiti is on the Rio Grande 14 miles west of U.S. 85 between Santa Fe and Bernalillo, while Santa Ana is just off State Road 44 northwest of Bernalillo.

There is much other activity for you to enjoy in New Mexico this month, topped, perhaps, by Rodeo de Santa Fe, July 8-11. Also on the 11th is the opening of the Ghost Ranch Nature Museum, on U.S. 84 near Abiquiu. All month Santa Fe's Museum of International Folk Art will exhibit "Popular Arts of Colonial New Mexico," and the Santa Fe Opera will be in its third season.

Utah-Nevada

(Continued
from page 15)

from here on is a rugged beautiful wilderness under the summer sun. Tall cottonwoods on the river's edge provide shade for camping and picnicking; great rocks and steep

hills rise sharply on either side. There is good fishing in the sparkling Carson, and mill ruins for you to explore. This is truly a trip into the past—the V&T was built to bring ore to these early mills.

A few miles beyond the Brunswick is the Merrimac Mill site, reached by a side road where the V&T main line swings left. Several small buildings have survived the mill itself—each big installation fostered a small town, though most of the homesites today are mere splinters and shards.

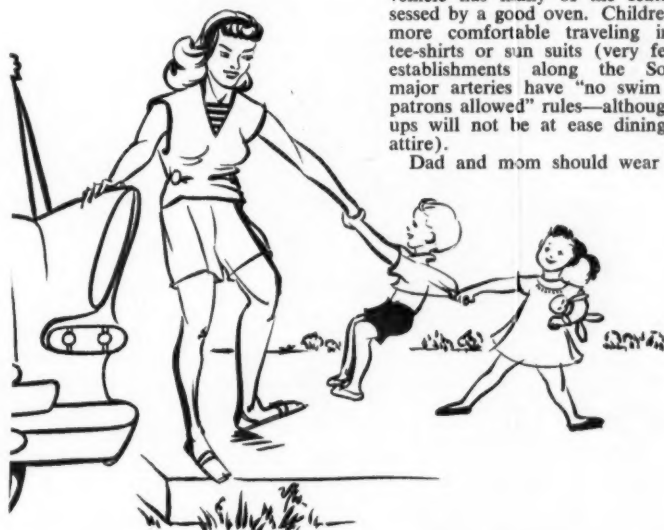
Past the Merrimac the main line begins what was a heavy climb for V&T locomotives, but an easy grade for modern cars. The concrete skeleton of a later mill lurks left of the road, and breathtakingly far below you'll see the rubble marking the Vivian Mill site. The narrow rocky cut on a sharp turn nearby was the scene of the V&T's first head-on collision in 1869; your imagination easily can re-create the scene, and it is fitting to lean on the horn—both in memory of the luckless engineer who lost his life here, and to warn other motorists who might be around the corner. Traffic on this road, however, is usually scant.

The roadbed keeps a nearly-constant level back to U.S. 50 from this point, but there is pleasant hiking down to river level at Zephyr Flat where the Carson bends sharply eastward. A roofless stone dormitory marks the Santiago Mill, and a narrow-gauge railroad can be traced from here down-river to the last big mill, the Eureka. You can glimpse the Eureka superintendent's deserted two-story home on a distant clifftop.

Long-gone ties have left red-brown stains across the road surface; crossing U.S. 50 the last of the V&T rails lie imbedded in the highway. Even with these visible mementos, it is hard to realize that this lonely lovely route resounded to industry and steam whistles a mere lifetime ago when Virginia City itself was young.

One of the problems facing a vacationer is what clothes to bring, which to leave home. If your summer outing includes a visit to or through the Southwest, keynote to your wardrobe selection should be comfort and informality.

Summertime travel in a non-refrigerated car is bound to be hot, for your



gas-burning all-metal hollow-interior vehicle has many of the features possessed by a good oven. Children will be more comfortable traveling in shorts, tee-shirts or sun suits (very few eating establishments along the Southwest's major arteries have "no swim suit-clad patrons allowed" rules—although grown-ups will not be at ease dining in such attire).

Dad and mom should wear loose-fit-

ting clothing, too. Dad will want open-at-the-neck shirts. Pack a necktie, but chances are you won't need it. Mom will get much practical use out of separates—shorts and halter for driving comfort, matching skirt for out-of-car wear. Pick a matching wardrobe group around which you can make multi-use outfits.

Footwear is important. Open-toe shoes or sandals will help keep your feet from swelling, but aren't advised for walking in the sandy country.

On the lower deserts (southern Arizona, southeastern California) there is little chance you will need a coat or even a sweater for evening wear. In the higher elevations (northern Arizona, New Mexico) you may feel the need for a wrap.

You'll perspire a good deal—which is a good thing because this is your body's method of keeping cool. But, it'll mean clothes will wrinkle and have to be changed more frequently than usual. Wash and wear, drip dry, is the word. Washed clothing dries overnight in the desert country.

DESERT PRIMER

CLOTHES FOR TRAVEL

Man of Three Names

By MARY BRANHAM

ENCARNACION PENA of San Ildefonso Pueblo, New Mexico, has two names and two occupations. In the pueblo and in the nearby Espanola Valley Encarnacion works as a builder, laying thick adobe bricks for the walls of new houses, plastering, putting up vegas for roofs. To his "anglo" neighbors he is an expert at building corner fireplaces. His skill as a builder keeps him so busy there is too little time for his other occupation—a pueblo artist.

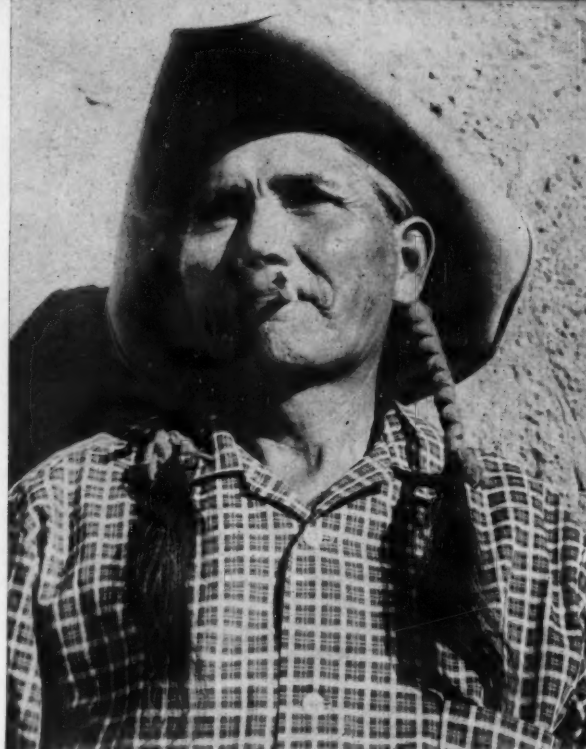
As an artist he is called Soqueen ("the mist that rises after rain"). When I asked him when he started painting he said, "A long time ago, when I was a boy in the Indian School at Santa Fe." Unlike his artistic ancestors, Soqueen does not use a yucca leaf brush or paints made from earth. His brushes are sable and his water colors are commercially prepared, but his skill can be traced to painters like the anonymous Indian artist who was commissioned by Coronado to draw the animals of the area on a deer skin.

Soqueen usually paints Indian dancers—an understandable subject since he participates in many of the dances in the pueblo. When I asked how many dances he could perform he shrugged modestly, finally said, "the buffalo dance, the eagle dance, bow and arrow, basket dance—many others."

This former San Ildefonso war chief regularly exhibits his paintings at the Santa Fe Fiesta and the Gallup Inter-Tribal Ceremonial. They are purchased by people in the valley who collect Indian paintings and by visitors who come to the pueblo from Santa Fe and Los Alamos for dances and feast days. They are also bought by tourists—the Denver woman who particularly liked his buffalo dancers, or the greeting card artist from Kansas City who called Soqueen's art "sophisticated."

Last spring Encarnacion the builder, and Soqueen the artist, acquired a third vocation—theater builder—and a third name—Enky. One evening as he sat on his doorstep a car drove into his yard. Two strangers stepped out and introduced themselves. They were investigating the possibility of building a summer theater on pueblo land—several acres lying between the pueblo and State Road 4, the Los Alamos Highway. There was a five room adobe house on the land, or rather the remains of a house. One of the five rooms belonged to Encarnacion.

Encarnacion Pena liked the two strangers, Marjorie Miller, the theater's producer, and Alice Bernard, the director. Though he had never seen a play, he was interested in their plans for an outdoor theater. He listened, and then talked to the co-owners of the land and building. They agreed to lease the property; the pueblo governor cooper-



ated, as did the Indian Service, and the theater was in business.

When I met Enky for the first time he was standing under a glossy green cottonwood tree in the yard of the adobe house. There was no roof on one wing of the L-shaped building. There were no windows or doors. The time was short and the problems many, but Enky had faith in the project.

At this time Encarnacion was helping build a house in the valley, but on week ends he worked on the theater. A great many enthusiastic people from Los Alamos, Santa Fe and Espanola Valley also helped. On week days these people were scientists, secretaries, housewives, librarians, engineers, teachers and accountants; on week ends they became carpenters, electricians, painters and plasterers. They had time, talent, ideas and ingenuity to contribute, but sooner or later they all turned to Enky for help and practical advice. It was Enky who knew how wide to cut a doorway and still support the heavy adobe walls, how to build a roof that did not sag, the right consistency to mix mud for plastering.

The theater was named The Don Juan Playhouse in honor of Don Juan de Onate. In the spring of 1598, Onate directed his company to present a play on the banks of the Rio Grande which flows near San Ildefonso. The players like to think their "patron saint" was the first European to produce a play in what is now the United States.

At the nightly rehearsals of *Blithe Spirit* Enky and fellow pueblo residents sat by and watched with interest. Pancho, Enky's collie pup, enjoyed the new attraction in the ancient village.

Three months after I met Enky we stood under the same big cottonwood and chatted during the intermission of the opening night performance. Around the old tree a flagstone seat had been built, and the names of the members of the first cast written in the concrete. Against the north wall of the adobe house a newly finished fountain

Encarnacion Pena of San Ildefonso Pueblo, New Mexico, is a handy man to have around if you need a picture painted, a fireplace built, or an old adobe house converted to a theater

LEFT — ENCARNACION PENA, SAN ILDEFONSO ARTIST AND BUILDER.

RIGHT—DON JUAN PLAYHOUSE STAGE, SETTING FOR FIRST OUTDOOR PLAY PRODUCED ON SAN ILDEFONSO LAND.

BELOW — ENCARNACION "SUPERVISED" THE CONSTRUCTION OF A FOUNTAIN AGAINST THE NORTH WALL OF THE THEATER, AND THE LOW STONE WALL ENCIRCLING OLD COTTONWOOD TREE THAT SHADES THE PLAYHOUSE PATIO.



bubbled clear water. Candles in hurricane lamps burned brightly on gaily painted tables. Around us stood an enthusiastic audience from St. Louis, Denver and Dallas and the surrounding communities.

Early in the play, Pancho, the pueblo collie who had seen most of the rehearsals, walked on-stage as if by cue. There were old friends performing and he gave the leading man in his white dinner jacket and the leading lady in her low-cut cocktail dress only a casual glance before he made room for himself between them on the divan, and settled down to enjoy the sophisticated Noel Coward comedy.

When the first season was over, it was Enky who supervised the "winterizing" of the Playhouse. Though he was busy working on houses in the valley during the winter, he also found time to build a corner fireplace at the theater. Plays were announced for a new season and with the first warm days work was underway to make the Don Juan ready for another summer.

Encarnacion Pena of San Ildefonso Pueblo enjoys his three occupations. As Encarnacion, the builder, he knows how to lay the bricks for corner fireplaces in houses built for scientists who delve into the secrets of the atomic age. As Soqueen, the artist, he uses a modern medium for his paintings but his style is reminiscent of that used by his ancestors when they painted murals on the walls of ceremonial kivas. As Enky, the theater builder, he enjoys watching a rehearsal of a modern comedy, but on feast days he takes part in ancient ceremonial dances.

He has lived most of his life in the shadow of Tunyo, the dramatic volcanic Black Mesa where *Tsah-ve-voh*, the giant who eats children, has lived for a thousand years. From Encarnacion's house in the pueblo he can hear heavy trucks passing on the busy highway that leads to Los Alamos, the Atomic City.

This is Encarnacion's way of life—a happy blending of the very old with the very new.—END



Alpine Island in the Desert



WHEN JULY HEAT
WAVES ROLL
ACROSS THE
DESERT FLOOR,
IT'S TIME TO
POINT YOUR
HIKING SHOES
TOWARD THE
TOP OF NEVADA'S
WHEELER PEAK . . .

HIKERS REST IN SNOW-
FIELD 1000 FEET BELOW
SUMMIT IN BACKGROUND.

By LOUISE WERNER

THE 8000-FOOT public campground, shaded by yellow pines, was loud with the clamor of Lehman Creek and its many tributaries that wander past tables and stoves and improvised rock fireplaces. Tall canelike grasses, yellow mimulus and blue penstemons were lush along the crooked little streams. The scent of wild roses filled the air.

A sign reading "Stella Lake, 5 Miles—Wheeler Peak, 7 Miles," ushered the Sierra Club knapsackers onto a path cut through rose thickets, young aspen and mountain mahogany.

A feathery cloud enveloped many of the mountain mahogany trees — a myriad of cycle-shaped wings on which the seeds would shortly escape. Yellow-brown eyes looked up from the depths of creamy mariposa tulips. Grasshoppers clapped their wings, hopping from tall grass to gray sage to scarlet penstemon.

It was the Fourth of July week end, and we were in eastern Nevada on the flank of 13,000-foot Wheeler Peak, heart of the proposed Great Basin National Park — an alpine island in the midst of a vast ocean of desert.

In September, 1955, writer Weldon Heald of Tucson rediscovered a live glacier, complete with bergschrund, crevasses and fresh moraines, in a basin hidden under a lowering cliff on the northeast face of Wheeler. Heald named it Matthes Glacier after Francois Emile Matthes (1874-1948), one of America's most distinguished geologists, and a world authority on glaciers. The ice mass, roughly triangular and about 2000 feet at its greatest di-

mension, has been seen by few, hidden as it is in a pocket in the shadow of the peak.

This icy remnant of an age long past has become the center of a movement to set aside 145 square miles of the Snake Range, including Lehman Caves National Monument, as a national park. Heald and fellow supporters of the park idea point out that the Wheeler Peak area, with its glacier, lakes, caves, easy stream-side trail passing in seven miles through five life zones, and its spectacular views of the surrounding desert, is a worthy candidate for national park status.

The Sierra Club members making this hike all carried these items in their back packs: sleeping bag, some type of shelter (from a mere sheet of plastic yardage to tents), dehydrated food, cooking and eating utensils, sweaters, coats or parkas, matches, first aid and toiletries. We had boiled down our needs to the bare minimum. My husband, Niles,



GERRIT AND MIKI BRATT ENJOY CAMPFIRE.

and I carried 19 and 17 pounds respectively, exclusive of camera equipment. Our down sleeping bags weigh about five pounds each; air mattress two pounds; long woolen underwear for sleeping, one pound; food for two days, two pounds; cooking can, cup, spoon and canteen, one pound; wool sweater and nylon parka, 10 ounces; first aid and toiletries, eight ounces; plastic shelter, two pounds; knapsack, three pounds.

The trail climbed gently through a forest of aspen, the sun sifting through yellow-green foliage to white bark and to red columbines luxuriating underneath. Butterflies hovered over musky-smelling white yarrow and lavender shooting stars. A wall of rock slabs piled in layers looked as if it might come tumbling down if you pulled out one of the lower pebbles.

Hike leader Dick Kenyon set a slow pace at first to allow us time to get used to our packs, but the rise in elevation was so gradual and the trail in such good condition that fast hikers were allowed to forge ahead. Desert Peak hikers usually stay behind the leader if there is any question about the route. In cases like this, however, where the route is known to be uncomplicated by forking or disappearing trails, hikers who prefer a fast pace are allowed to go on—provided the leader feels they are capable of looking after themselves. Some hikers keep their eye

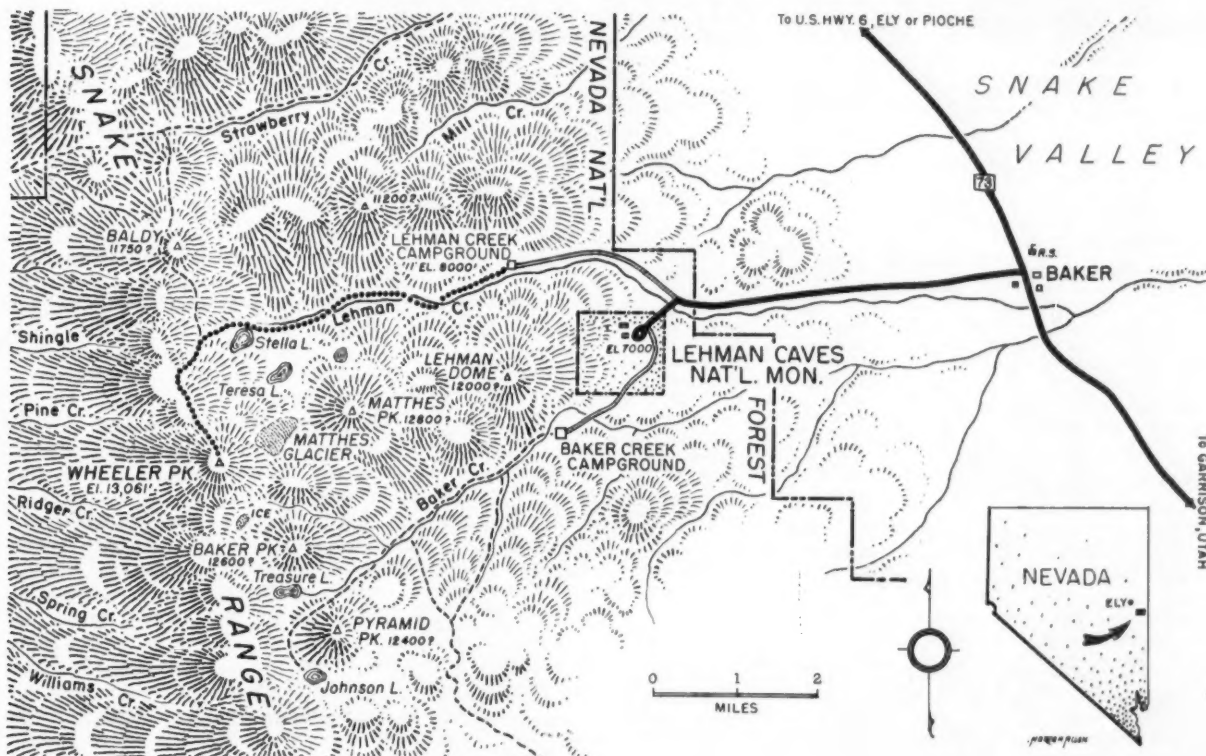
Nevada's First National Park Soon May Be A Reality • By WELDON HEALD

In April the National Parks Advisory Board recommended to Secretary of the Interior Seaton that eight new areas be included in the National Park System. Among them was the Wheeler Peak-Lehman Caves region of Nevada's Snake Range. The reasons given in favor of the Wheeler area: "... its recognized scientific values and ... findings that have determined it to be representative of the numerous Great Basin mountain ranges and as such of national significance."

This is a major advance for the proposed Great Basin National Park, a project that has state-wide backing in Nevada and is warmly endorsed by several national conservation organizations. However, some opposition has been expressed by stockmen, sportsmen and, tacitly, by the Forest Service, which recently countered the park proposal with a Wheeler Peak Scenic Area. But the protests are largely due to misunderstanding and in most cases differences have been settled satisfactorily.

A bill for the creation of the park is being written in cooperation with the Interior Department and will be introduced in Congress by the Nevada delegation. It provides an area of about 145 square miles and includes Lehman Caves, Wheeler Peak and the Matthes Glacier. Within the boundaries the terrain stretches from the desert valleys, with their antelope herds, to the arctic-alpine zone, above timberline. In fact, one authority emphatically stated that "The Wheeler Peak area has a greater variety of outstanding scenery than any existing national park."

However, the preservation of this magnificent piece of original America is far from accomplished. Those who are concerned with our rapidly dwindling scenic resources can help by joining the Great Basin Range National Park Association. The annual dues are \$3, sent to Glenn C. Osborne, Treasurer, Garrison, Utah.



steadily on the day's goal, others saunter along as if each moment holds all there is.

On our left, Lehman Creek babbled by. A couple of zigzags brought us to the top of a ridge where we stopped to look back over our route. Our eyes followed the creek down to the wide Snake Valley.

We crossed the stream on a log, admiring maidenhair ferns and a clump or two of heuchera whose heart-shaped leaves drooped to catch their reflection in the water. The top of Wheeler Peak came into view through a break in a dense stand of Engelmann's spruce. Busy clouds were drifting up behind the rocky mass.

The sight of our destination was a good excuse for a rest stop. We took off our packs, which were beginning to feel somewhat heavier, and dug out some lunch: dates, cheese and crackers, nuts and hard candy. Elevation here was 9500 feet.

After his third cup of sparkling water from the creek, Niles observed that he had seldom seen a mountain stream as accommodating as Lehman Creek—always within reach, never running away to tantalize the thirsty hiker with liquid sounds from unreachable canyon depths.

The boiling clouds reminded us of the mountain's reputation as a rainmaker. Reluctantly we shouldered our

packs and started up the last thousand feet to Stella Lake.

Young aspen bowed to the ground, prostrated by last winter's snow, patches of which still remained. Dead logs lay about, in varying states of decay. Armies of ants, driven by a compulsive urgency, marched endlessly in and out of dust piles left by decaying spruce.

Clouds overtook the sun; gloom overwhelmed the forest, and suddenly we missed the warblings of birds. Faint thunder rumbled up canyon, and a few drops of rain fell. Then the sun came out again, more brilliant than ever, or so it seemed.

Coming upon a lake in a desert mountain range was a new experience for me. My California desert mountains boast no lakes, not even the White Mountain Range which rises to 14,242 feet, and is the highest desert mountain range in the U.S.

Stella Lake, at 10,500 feet, and Teresa Lake, a few hundred feet higher, are not large or deep when compared to Sierra Nevada lakes at this elevation, but in this desert setting they were a rare find—at least so they seemed to me as we searched the slopes surrounding Stella Lake for level campsites. A robin was combing a large snowfield for insects. A grosbeak's fine little melody, heard from the top of a tall spruce, was scoffed at by two crows, and a



Here are more "Alpine Islands" for you to explore this summer

★ Kings Peak

El. 13,498 ft. Highest point in Utah. Uinta Mountain Range, northeastern part of the state.

APPROACH by car: From Urie on U.S. Hwy. 30S, in southern Wyoming, drive south and east to Lone Tree, near the Wyoming-Utah border. Turn right on road up Henry's Fork (of the Green River). Leave car where road peters out to a trail.

HIKING: Trail continues up Henry's Fork to a series of headwater lakes at the northwest base of Kings Peak. Peak may be climbed from these lakes or trail may be followed skirting the peak on the northeast.

CAMPING: Carry an overnight knapsack and camp at one of the high lakes so as to reach Utah's highest point early in the day while visibility is at its best. Kings Peak stands near the Four Corners, overlooks not only the forested canyons and meadows of the Uintas, but also the headwaters of the Green River coming down from Wyoming's Teton, a bit of the southwestern corner of Idaho, and the western slope of the Rockies in Colorado.

★ San Geronio

El. 11,485 ft. Highest point in Southern Calif.

APPROACH by car: Redlands, through Mentone, up the Mill Creek Grade to Camp Angeles. Barton Flats Road to Jenks Lake turn-off. Pass Jenks Lake and continue up dirt road to its end at Poopout Hill (7500 ft.).

CAMPING: Designated campsites a mile below Poopout Hill and at Dollar Lake. Wood and water. Fire permit required.

HIKING: 8 miles one way up a good trail, 4000 ft. gain in elevation. Trail through tall forest, follows South Fork of the Santa Ana River to So. Fork Meadow, then cuts right, up the slope to Dollar Lake (9000 ft., 4 mi.), good place to camp.

ALTERNATE route: 11 mile trail to summit takes off from Mill Creek Road 2 miles east of Forest Home Lodge. (The Mill Creek Road forks right from the Mentone road at Igo's Store.) Road climbs the mountain from the southwest, up Falls Creek Canyon to knapsacking campsite at Plummer Meadow (9000 ft., 7 mi.). Thence the trail continues to Dollar Saddle, meeting the previously described trail which comes up from the north.

★ South Truchas

El. 13,102 ft. Highest point in the Pecos High Country of northern New Mexico.

APPROACH by car: For a weekend knapsack trip over less-frequented route, drive from Truchas (True-chas) 5 miles east up Valley of the Rio Quemado.

HIKING: Carry overnight knapsack. Follow south side of irrigation ditch for two miles, cross to the opposite bank on log bridge and pick up the trail along the north side of the Rio Quemado for 3 more miles to Truchas Falls. Trail then climbs north from falls area and crosses the stream into the Lower Truchas Amphitheatre, fine for camping; or continue another half mile to timberline spring in Upper Amphitheatre and camp in full view of the peaks, at 11,500 ft. Gain in elevation, 2000 feet in 6 miles.

CAMPING: Primitive, unrestricted, wood and water in abundance.

CLIMBING the peak: From Upper Amphitheatre you can see Middle Truchas Peak to the south, on a spur leading west off the main north-south ridge. A fairly easy rock scramble up the ridge to the west of Middle Truchas Peak brings you to the summit of 13,066 foot Middle Truchas.

Continue east to Useless Truchas where the Middle Truchas spur joins the main north-south ridge—halfway between North and South Truchas peaks, each about a mile away. An easy hike along the ridge to South Truchas affords magnificent view of Pecos River headwaters, fir, spruce and aspen forests, and Truchas lakes.

Pecos High Country is second oldest

National Forest, set aside in 1892 to preserve watershed and abundant wildlife—deer, elk, bighorn sheep, lions, beaver, wild turkeys, many others.

Return by same route. Top of the ridge presents no problems, but short-cuts lead to dangerous drop-offs. Ridge to North Truchas Peak is more difficult, bordering on the need for a rope.

ALTERNATE route: State Hwy. 63 ends near Cowles, 20 airline miles south of Truchas Peaks. There are improved campsites in this vicinity, as well as cabins and pack stations. You can ride a horse to within four miles of the summit of South Truchas Peak. Remaining distance is a fairly easy trail-less boulder scramble.

REFERENCE reading: "Beatty's Cabin," by Elliott S. Barker, gives fine introduction to the wildlife, geology, history, weather, etc., of Pecos High Country.

★ Mt. Humphreys

El. 12,794 ft. Highest point in Arizona. The San Francisco Mountains.

APPROACH by car: Drive north out of Flagstaff to Snow Bowl, a ski area on the west slope of the peak, 15 miles. (An old toll road climbs from near the Flagstaff City reservoirs up the south slope, ending at 11,900 ft., 17 miles from Flagstaff. At last report it was blocked by windfalls and rock slides. The end of this road is within two miles of the summit of Mt. Humphreys, and passes within a mile each of two other high points, Agassiz Peak, 12,340 ft., and Fremont Pk., 12,000 ft.)

CAMPING: Kit Carson Public Camp-



ground, 3 miles west of Flagstaff on Hwy. 66. Water but no wood to burn.

HIKING: 5 miles one way, gain in elevation 3500 ft. From Snow Bowl the summit of Mt. Humphreys can be seen. Pick your own route up the trailless slope, through aspen lanes and corridors of pine, spruce and fir, to the volcanic rocks of the upper ridge, and hence to the top. The going is nowhere difficult.

Isolated San Francisco Peaks are of volcanic origin, dominating extensive areas of forest, desert, volcanic craters and lava flows. On an average day Black Mesa, on which lie the Hopi villages, can be seen 75 miles to the northeast, while on a very clear day visibility may reach 200 miles, to Mt. Delano in Utah.

★ Blue Bottle Peak

El. 9400 ft. Highest point on the Great Western Slope of the Sierra San Pedro Martir, Baja Calif.'s highest mountain range.

APPROACH by car: 85 miles south of Ensenada, on Baja Calif. Hwy. 1, turn left on dirt road (large sign on the left of the highway reads "Hacienda Sinaloa," and small sign on the right reads "Rancho San Jose") and drive 32 miles to Rancho San Jose.

ACCOMMODATIONS: Rooms, board, riding horses, guides and pack animals at Hacienda-type rancho at 2200 feet in the western foothills of the Sierra San Pedro Martir; rancho owned by Meling family.

RIDING and hiking: A day's ride up through the chaparral foothills brings you to the lower edge of Baja Calif.'s only real stand of timber—oak, pine, fir, juniper, aspen, cypress and cedar—a forest 60 miles long and 20 miles wide between elevations 6000 and 10,000 feet, recently set aside by the Mexican government as Baja Calif.'s first national park.

A day's ride up through this forest brings you to Picacho Spring, 8500 feet, which is about as high as your horse (and guide) will go.

A word about guide service: A first-

timer, trying to find his way around this virgin country without a guide, can run into serious difficulty. Trails crisscross with nary a trail sign; landmarks are few and confusing; maps with topographic detail are not available; water is where you find it. With a guide this primitive wilderness becomes safe and immensely rewarding.

Blue Bottle summit is visible from Picacho Spring as the highest point on the horizon to the east, about a mile of trailless scrambling away. It affords not only a sweeping view of the forest and the entire western slope to the Pacific Ocean, but also overlooks the desert to the east, Gulf of California and the mainland of Mexico. El Picacho del Diablo, Baja Calif.'s 10,100 foot high point looms close, cut off by a 3500 foot gorge. (El Picacho is a strenuous climb best approached from the east side of the range.)

Though your guide may scorn to accompany you to the top (because why should a man want to go where a horse can't?) if you have gotten as far as Picacho Spring, don't go back to the flatlands without having stood on the top of Blue Bottle Pk. A word of caution: make frequent rock piles (ducks) on your way up, so you'll have no trouble finding way back.

CAMPING: Utterly primitive, usually by some spring or waterhole known only to the guides. Water sources, though sufficient and safe, are not plentiful. Wood plentiful.

★ Santa Rosa

El. 4800 ft. Highest point in the Ajo Range of southern Arizona.

APPROACH by car: From the headquarters of the Organ Pipe National Monument (State Hwy. 85) the cone-shaped summit of Santa Rosa Mountain can be seen to the southeast, separated by a saddle, from a massive rock face on its left.

Drive 4½ miles (preferably with jeep or desert-going truck) south on the Sonoyta road from the Monument Headquarters, turn east on Border Patrol road toward Gray's Ranch, 3 miles. Turn left on obscure truck trail and

follow this for 11 miles to an old concrete dam.

HIKING: From the dam work up the left side of a wash in a northeasterly direction to pick up an old Indian trail that leads up the gradually narrowing canyon to White Horse Pass. Just before the Pass an iron fence divides the Monument area from the Papago Indian Reservation. On the flat above the gate, leave the trail and go left (north) over a low ridge, then over a higher ridge. A third east-west ridge surmounted by two prominent pinnacles now comes into view. The pinnacles may be by-passed by easy ledges. Follow the ridge to the main north-south crest of the Ajo Mts. and proceed to the yellow-rocked summit visible to the north. Carry canteen. Allow a full day for the round trip from the Monument.

CAMPING: Headquarters of the Organ Pipe National Monument. Water available. Bring gas stove. Vegetation encountered: organ pipe, senita, cholla and saguaro cactus, ocotillo, palo verde, mesquite, lupine and poppies. Wildlife: horned lizard, banded gecko, javelina, many birds.

★ Mt. Charleston

El. 11,910 ft. Highest point in the Spring Mts. northwest of Las Vegas, Nev.

APPROACH by car: Hwy. 95 14 mi. N.W. of Las Vegas, turn left on Kyle Canyon Rd. and continue 21 miles to end of road (el. 7500) in Charleston Park. Hard surfaced all the way.

CAMPING: Improved campsites with wood and water, among tall pines, along upper part of the road.

HIKING: Good, posted trail to Mt. Charleston (9 mi. one way, 4400 foot gain in elevation), begins near the end of the road. Passes through beautiful pine and aspen forest, zigzags up a wall of sedimentary rock to meadowed shelves and ledges, finally contouring up bare slopes to the top. Rock here is highly fossilized. Good display of fossilized shells found by leaving the trail ½ mile before summit, scrambling up to the top of the ridge and following it to the summit. Deer are commonly seen in the meadows. Carry canteen.

★ White Mtn. Peak

El. 14,242 ft. Highest desert peak in U.S., east of Owens Valley, Calif.

APPROACH by car: Hwy. 395 in Owens Valley, to Big Pine. Fill gas tank—none available beyond Big Pine. Take Westgard Pass road, turn left on Navy road to camp at McAfee Meadow, 11,500 ft. Motor, brakes and tires should be in good condition for steep grades on unimproved road along the backbone of the White Mountains. Be prepared to drain the radiator as it may freeze at this elevation.

Some specimens of bristlecone pines along this road. Many acres of these trees in White Mountains were recently set aside for special protection after scientists declared them to be the oldest living things, older even than giant Sequoias.

CAMPING: McAfee Meadow, or as near there as your car will take you. Primitive camping; there is no official campsite. Bring water and wood (or gas stove).

HIKING: 7 miles, one way; 2800 foot gain in elevation. Entire climb is above timberline, with spectacular views of the Sierra Nevada across Owens Valley to the west.

The Navy has built a station for high altitude research near summit, where scientists are studying the effects of cosmic rays and other high altitude phenomena, on humans and on animals. Trail to the highest buildings takes you to within an easy scramble of the summit.

Allow a long day for the 14-mile round trip. Hiking will be slow at this elevation. The average person will get along better by maintaining a pace slow enough to keep going, than by a stop-and-go routine with frequent rests. If altitude sickness is a threat, eat a light breakfast avoiding fat and other food that has, at times, upset your digestion.

From the summit you look down on the surprisingly lush stream-filled canyons on the east side of the White Mountains, and across Fish Lake Valley to the Nevada desert, punctuated here and there by desert mountain ranges.



HIKERS ON THIS TRIP WERE PREPARED FOR WHEELER'S FREQUENT RAINS. HOMEMADE PLASTIC TENT ABOVE WEIGHS TWO POUNDS, DOUBLES AS A "PRIVATE" OUTDOOR SHOWER.

light brown bird sitting on a low limb kept saying, "thrt, thrt, three-o-wheat," as if adding a commercial.

There was plenty of firewood at hand and Niles soon had the tea water sizzling in a pound coffee can—one of two that constituted our entire set of cooking utensils. A pound coffee can, with its broad bottom, allows food to heat quickly, is about the right size for a one-dish hot meal for two, and is expendable. We long ago reneged at bringing home blackened pots to clean.

Raindrops hissed on our fire and splattered into our corn chowder—a dish containing dehydrated corn, potatoes, milk, onions and seasonings. At this elevation it required about a half hour's simmering. Our ounce packages of pre-cooked dehydrated beef being new to us, we nibbled right out of the package. It tasted so good we sprinkled the remainder on top of the chowder after dishing it up, rather than dumping it into the pot and losing sight of it. A sauce of dried apricots (we cooked enough for breakfast, too) made a fine dessert.

Our entire dinner—including tea and sugar—only weighed six ounces per serving in our knapsacks. Improved dehydrated foods like these, along with plastic shelters, down sleeping bags and nylon parkas, have revolutionized knapsacking. Today you can go into the mountains for a long week end with less than 20 pounds on your back and be better equipped than was the knapsacker of 15 years ago who carried 50 pounds.

Now and again, during our meal, showers sent us running for our plastic shelter. Clouds hung low when we

got together around the campfire that evening. Bedtime comes early for knapsackers, and at nine o'clock we dispersed—happy to see quite a few stars against patches of cobalt blue sky.

After a breakfast of coffee, frosted flakes with powdered milk and the left-over apricot sauce, we joined the group on the trail. The hikers left most of their gear in camp, I carried a lunch, quart of water, parka, first aid and camera.

Thin ice edged the lake in places, and most of us were puffing when we clambered up the slope beyond the lake. Large snow fields were numerous now, and the spruce was becoming more and more scrubby in this "alpine island."

On top of the ridge we found remnants of an old trail used more than a hundred years ago when the top of Wheeler Peak served as a heliograph station. The flashing mirrors of the heliograph sent messages in Morse code before the telegraph came into use. These messages were relayed as far as 200 miles—from one mountaintop to another. Wheeler was an intermediate station between Mt. Nebo in Utah and an unknown peak to the west. Historians have pretty much neglected this form of early-day communication.

Although the old heliograph trail appeared and disappeared, we needed no path to the summit of Wheeler. We followed the backbone of the ridge all the way. At 12,000 feet we were breathing hard, barely putting one foot in front of the other. Patches of pink phlox and white phlox seemed to find the thin air invigorating. There was a bite in the wind that came over the ridge in little puffs to slap us in the face. We stopped to put on our wraps. As noon approached, clouds were gathering about us.

At 13,000 feet lavender-blue polemonium hugged the rocks. Looking back over our route the ridge curved down to a snow-corniced edge above Stella Lake. To the right Teresa Lake had come into view. Far beyond Lehman Creek Canyon the highway threaded the flat toward Sacramento Pass to the northwest.

On top of Wheeler we found remnants of the old stone walls of the heliograph station. The attendant's job must have been a cold one. For years after the station was abandoned a little wood stove had remained in the shelter until an "antique lover" hauled it away.

Eager to glimpse Matthes Glacier, we edged as close as we dared to the 2000-foot precipice that overhangs the cirque. All we could see of the glacier from this vantage point was a ragged edge of snow on the ice mass far side. To properly view the glacier you have to make a different approach, perhaps over the rugged ridge above Teresa Lake—and the best time to do this is in September after the year's fresh snow has melted off of the crevasses, fresh moraines and bergschrund.

When we returned to the summit it was snowing—in the very heart of the Desert Southwest—on the Fourth of July!—END

A Forest At Our Feet...

"Step by step we forced our way along, now stopping to take breath, now lying down on the sloping snow or rugged rock to rest. At last the flat summit (of San Geronio) was clearly outlined before us.

"A few more gasps, a few more struggles and we were on top. I had purposely kept my eyes from

looking out before I was fairly on the summit. I wished to see nothing until I could see all. In a moment the great vast scene was given to me. It was mine to enjoy, to wonder over, to study, and to feel its gigantic power. The first impression was that it was not, could not be real. It was so wonderful, so vast, so extensive,

so diverse, and everything was so magnified — space, distance, sandy wastes, flat plain, water—that it seemed as if it was one of the opium or hasheesh dreams of DeQuincey or Fitzhugh Ludlow. It was monstrous, enlarged beyond conception, terrific in its power. Then, too, it was so strange, so foreign. It was desert, yet at our feet was a great forest."

— George Wharton James' "The Wonders of the Colorado Desert" (1906)

My Singing Garden...

By HARRIETT FARNSWORTH

WHEN CIRCUMSTANCES sent me to the high desert, I parked my small trailer on a hillside a mile from the village, then looked around disconsolately, wondering what on earth I'd find for amusement in this silent lonely land.

The mountains holding the valley snugly in an elbow bend were comforting, the ancient Joshua trees were fascinating; but from sheer loneliness I walked about talking to the birds. Then, without considering the consequences, I scattered crumbs about my doorstep. When a bird paused to pick up my handouts, I talked to it softly. When they began bringing in their relatives and friends, I started regular feedings and placed water about in shallow earthen dishes. After that, I really began having company!

Birds flew in from everywhere, chirping, singing and twittering. Soon they were feeding with less caution, and paying me scant attention when I slowly moved among them, humming or talking in a low voice. In time, these little creatures captured my imagination, and the days became filled with delightful surprises.

Spring, far from being the lonely time I had anticipated, quickly slipped by while I watched my amusing little boarders. A friendly house finch built her nest in the patio, and ingenious cactus wrens turned thorny chollas into safe apartment houses.

During this busy nest-building season, the birds dropped a few hints as to their needs. One morning while watching a sparrow tugging industriously at an old cloth tacked to an outdoor bench, I stood wondering why it annoyed her. When she flew back to her nest site with a tiny scrap of the cloth in her bill, I realized what was going on. I helped with the nest building business after that, and began feeling very important.

Nest Materials

I gathered bits of bright wool, yarn and soft cloth cut into narrow strips, and hung them conspicuously about on the bushes near the door. They disappeared almost as fast as I put them out. My simple offerings gave bright touches to the future maternity wards, and appeared to be much appreciated by these busy little mothers-to-be.

News of the encouragement I was offering my little boarders continued to spread. Now I had dozens of the rosy-necked house finches, melodious orioles, sassy flycatchers, and inimitable cactus wrens building their nests practically under my nose. What miracles were taking place in those shelters!

Hours melted away while I waited for the mothers to leave their nurseries so I could peek in and see what was happening. Often I was caught at the nests when they returned—but they were so accustomed to my presence they seemed little disturbed.

By the time the fledglings appeared, some of the happy mothers acted as if they expected me to care for their precocious babies. How nice to find such a competent nurse to take over in their absence!

The lonely hours vanish for a woman who takes to feeding the birds which frequent her desert home.

In time my thoughts turned to bird houses. These lent a bright and charming touch to the premises. Mine were simple affairs made from handy materials—cigar boxes, bark from trees, wood from old orange crates.

An ordinary apple-box cut in half made a simple but attractive feeding station with a front porch overhang. This I nailed to a stump in front of a bush—giving the birds a feeling of security. When I placed grain in it, they seemed delighted with my humble efforts. The feeder never lacked an assortment of chattering chirping visitors.

Where were the lonely days I had anticipated? They had slipped away, filled to the brim with new interests. I had never been busier!

Then summer came. Water, scarce on the high desert during the dry summer season, always was waiting in the shade of my trees. It was fresh and clean all the time because I kept the yard hoses dripping in the containers. Colored stones placed in these basins made the birds' watering and preening places more attractive and safe. What gay bathing parties went on at all

times! Cheerful chirpings and chattering told me how much they appreciated my thoughtfulness.

Birds are prompt little creatures. My clock could have been set by their arrivals for breakfast, brunch, lunch, afternoon tea and evening dinner. They picked and pecked at everything, chirping and chattering gleefully. Now and then some pampered little queen would try to rule the roost, and then a battle raged. However, these squabbles always ended in gay community song fests.

Road Runners, Too

Years melted away on the hillside. Birds multiplied. Several coveys of Gambel's quail moved in. They skittered out from the bushes at feeding time, morning and evening. In moved a cocky road runner. In time he brought along his impudent wife. At 10 and four every morning and afternoon they looked in on the bird parties.

I lived with birds, began slaving for birds. I planted tubular flowers to delight the hummers. I added scarlet trumpet, morning-glory, an assortment of cacti and bird-of-paradise for my friends.

Not even in fall and winter was I lonely. Many birds flying south stopped for water and food at my place. There were always surprise visitors feasting and resting in the yard. Often they tarried for days before continuing their journeys over the southern mountains to warmer climates. One cold December morning I was thrilled to find four plump round-bellied bluebirds at the feeders.

Early one spring a robin dropped in to see me. As he hopped past my door, he studied me with round curious eyes. He checked both feeders and fountains, then drank, and with the straight-backed dignity of a red-vested gentleman, hopped back the way he had come.

Spring again was in full swing. The flowers about my door burst into bloom, every bush was alive with bird songs, the busy little hummers and verdins flitted about enjoying their feasts of bugs and nectar. I walked about with a song in my heart every time I looked at my singing garden.

Eight years have slipped by since first I met my birds. I will never be an Audubon, or a Dora Isenberg, the lady who stocked the Hawaiian Islands with rare and exotic birds; but I have come to love and appreciate these little friends as much as anyone could. I know that no matter where I might roam, be it swampland, city or jungle, I'll always throw out a "welcome mat" of food to keep a singing garden about my doorsteps.—END



BUFFALO GOURD

Desert Vines

STRANGE SOUNDS awakened me one night while camped in the charming Kofa Mountain country of western Arizona—a hollow scraping noise completely unfamiliar to me in all my years of desertland exploration.

Sitting up in my sleeping bag, I looked around, intent on finding the source of the unusual sounds. Soon I discovered the “noise-maker”—a young kit fox—20 yards up the wash—was playing with a detached and dried gourd, using his front paws to batter it over the ground.

The cucumber or gourd family (*Cucurbitaceae*) contains at least 87 genera and 650 species in temperate and warm regions of the world. Several of the perennial gourds are local to widespread on our Western deserts. Perhaps the most common and beautiful is the buffalo gourd or calabazilla (*cucurbita foetidissima*). Because of its fetid odor when crushed, it is not too highly esteemed!

Chief charm of the vine is the beauty of its abundant big green, gracefully-poised triangular leaves, covered with bright silvery hairs. The large yellow tubular flowers are attractive, as are the fist-sized yellow-striped gourds which appear in late summer and autumn.

Given sufficient water, this gourd is an amazingly fast grower, sending out its numerous radiating runners 15 to 20 feet in a single season. With room to spread, it will cover many square feet of ground. I have several plants growing in my garden where they serve as a substitute for a lawn. They require no care, little water and are always good looking.

The plant's strong disagreeable odor when crushed is a protective device of considerable import. I have yet to observe any

animal that will eat the leaves. The root is intensely bitter. It is unfortunate that some of the gourd's defenses against mildew cannot through cross-breeding be built into our domestic garden cucurbits, such as watermelons, cantaloupes and cucumbers.

Early Mexican housewives were aware of the value of the

By EDMUND C. JAEGER, D.Sc.
Curator of Plants
Riverside Municipal Museum

roots in whitening clothes. They put cut-up roots in their wash water. Arizona Indians ate the cooked gourds, grinding the seeds into a mush.

Two closely related and attractive gourds are widespread on our deserts, both prized for their handsome five-part leaves.

Cucurbita digitata has leaves with very long narrow lobes (finger-like or digitate), the upper surface being dark green with conspicuous bands of small white hairs along the main veins. The handsome deep-throated flowers with flaring petals are yellow in color, as are the ripe gourds.



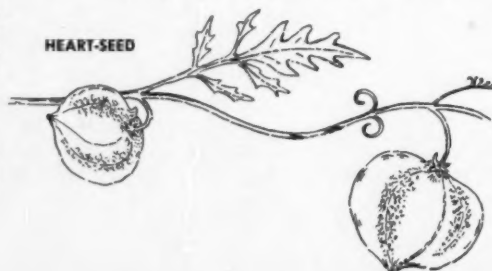
FINGER-LEAF GOURD

Leaves of the closely related *Cucurbita palmata*, a plant of the broad, glaring sand-washes, are light gray-green on the upper surface, not so deeply cleft. Its yellow gourds,

often called “coyote melons,” are considered utterly worthless, but as folks say, “good enough for coyotes.” In times of great hunger, coyotes will actually feed upon the gourds' oil-rich seeds.

Most interesting of all gourds are several kinds called deer-apple, snake-apple or ibervilles (the latter name honors an early—in the mid seventeenth century—French-Canadian naval officer and explorer, Pierre Iberville). These gourds are found from arid west Texas across Sonora to Baja California. They have enormous bulbous roots, some as big as small casks and shaped like giant turnips with projecting necks from which the vines come forth. In Baja I quite often found these water-swollen roots almost hidden or jutting half above ground under the shade of large shrubs. Root-stored water enables the vines to come forth each spring, climb rapidly through any support they can find—trees or shrubs—and produce fruit

(big round “berries”) though there has been little or no recent rain. During the long dry summer, the slender vines with their three-to-five-lobed leaves wither back to the persistent home base. The name snake-apple probably had its origin in the erroneous



HEART-SEED

supposition that the small bites taken out of the fruit by birds and insects were actually made by snakes.

One of the most beautiful and dainty of our desert vines was given the generic name *brandegea* in honor of Townsend Brandegee, early Western botanist. *Brandegea* is a riotous climber following generous winter rains or sand-soaking summer cloudbursts. In vivid green it may smother the



BRANDEGEA

branches of smoke trees, ironwoods, palo verdes and other trees that grow in sand washes down which flood waters run.

Several *brandegea* vines growing in a cluster can put a canopy of green of from 50 to 200 square feet over a close-set group of several trees. I saw many such massive coverings last spring in Baja California and southwest Arizona.

Trailing leafy stems, small in diameter, often reach out 10 to 12 feet along palo verde or ironwood branches, then hang down from the ends in beautiful festoons of lively green. Flowers and fruit are inconspicuous, but the numerous leaves, though not large, make up for the plant's lack of floral show. Nature rarely designs two *brandegea* leaves alike: some are almost round like a shield, others palmately three-lobed. Nearby may be others with margins so deeply cut they look like small green stars. On the same vine will be thousands of others of

every conceivable intermediate design. The students of heredity use the term "genetic instability" to describe such a situation.

Brandegea is a perennial vine with large thick roots, a feature common to many gourds. Once established, the roots contain enough stored water and food to carry the plants through long seasons of drouth, and then set them on their way to vigorous growth when adaptable moisture saturates the sandy washes in which they grow.

The sweet potato or morning glory family (*Convolvulaceae*) is represented on our deserts by several kinds of dodder or love-vine. Their golden yellow, orange or faint-brown thready stems often enmesh the small leafy shrubs or trees they parasitize. Having no leaves, they possess an abundance of small flowers. Shrubs of the buckwheat and rose families and some of the *Compositae* (sun flower) family most often are the host plants.

On Baja's Vizcaino Desert is a dodder confined exclusively to the big elephant tree (*Pachycormus discolor*), the tree having a soft sap-filled bark that this dodder is readily capable of penetrating with its feeder pad "roots." It is not known how the dodder seeds are dispersed. They germinate profusely. The elephant tree's thick contorted branches are sometimes completely enveloped in thready tangled dodder stems. When the dry season comes, the dodder dies, but its knots of dry stems remain for many months to provide a very strange sight in the living elephant tree.

Beautiful, intriguing and remarkable in form are the delicate three-angled inflated pinkish paper-like pods of the heart-seed (*Cardiospermum*) or "jaboncillo," as the Mexicans call it. They resemble small Japanese paper balloons. Few people, seeing them for the first time, do not immediately exclaim over their beauty. Following this—invariably—comes the question: "What's inside these pods?" (The feather-weight seed vessel contains three dark brown to black pea-like seeds each with a perfect whitish heart-shaped basal spot.)

This plant belongs to the soapberry or buckeye family (*Sapindaceae*). Some of the desert dwelling members contain in their fruits a violent glucosidal poison, saponin, used by the aborigines to stupefy fish.

There are a number of climbing milkweeds (*Funastrum*) whose milky-juiced pods were a much-prized food of the Papago Indians. The long wiry stems, often eight to 10 feet long, twine profusely about one another to form strange finger-thick ropes that trail

over the banks of washes, or climb trees and shrubs. The milk or latex which exudes profusely from the broken stems has a strong penetrating odor not at all pleasant—once smelled it is not soon forgotten. The white, yellowish or purple flowers (color varies with the species) occur in handsome clusters. Some are fragrant and much visited by flies and many kinds of wild bees.—END

Desert Quiz

Here is a new type of desert quiz — one in which you pick the one word in each question that does not have common bearing to the other three. For example, in Question 1, Gila, Green and Colorado are Southwest rivers—Panamint is a mountain range. Therefore, you would mark Panamint. Put on your thinking caps and try your best. Thirteen correct answers is a fair score; 14 to 16 is good; 17 or more is excellent. Answers are on page 40.

1. Gila..... Green..... Colorado..... Panamint.....
2. Palo Verde..... Pinyon..... Verbena..... Palm.....
3. Navajo..... Smoki..... Apache..... Ute.....
4. San Jacinto..... Sunset..... Amboy..... Ubehebe.....
5. Hoover..... Parker..... Roosevelt..... Kaibab.....
6. Mead..... Sangre de Cristo..... Superstition..... Chocolate.....
7. Saguaro..... Ocotillo..... Cholla..... Organ Pipe.....
8. Phainopepla..... Kit Fox..... Say Phoebe..... Shrike.....
9. Snowflake..... Death..... Salt River..... Owens.....
10. Colorado..... Alamogordo..... Great Salt Lake..... Mojave.....
11. Georgie White..... Kent Frost..... Frank Wright..... Edmund Jaeger.....
12. Algae..... Pliocene..... Miocene..... Tertiary.....
13. Peccary..... Sidewinder..... Diamondback..... Timber.....
14. Bryce..... Zion..... Santa Fe..... Grand Canyon.....
15. Creosote..... Havasu..... Mead..... Pyramid.....
16. Mesa Verde..... Keet Seel..... De Anza..... Tuzigoot.....
17. Bodie..... Aurora..... Garlock..... Salton.....
18. Walker's..... Pegleg's..... Dutchman's..... Breyfogle's.....
19. Bright Angel..... Dante's View..... Old Spanish..... Bradshaw.....
20. Geode..... Concretion..... Chalcedony..... Canteen.....

READER RESPONSE

Where Credit Is Due . . .

Desert:

We on the *Glendale News* were happy to find one of our recent news items in your fine May issue.

Since the story referring to the establishment of the town of "Churchill" was broken first in our paper we would have been happier still to see a *Glendale News* credit line. However, it is good to know that your alert staff reads "Arizona's Fastest Growing Newspaper."

H. W. POTTER, managing editor
The *Glendale News*
Glendale, Arizona

Lost Mines, Real Mines . . .

Desert:

The article in your April issue, "Lost Silver in the Trigos," was of great interest to me. In July, 1925, I sampled the Red Cloud Mine for some Philadelphia mining operators. The results were of sufficient interest to justify an option, and this group

spent about \$100,000 on the property. They developed an ore shoot on the 500 foot level just above the permanent water level of the mine. Before their development was completed a cash payment of \$40,000 was due on the option and the company asked for an extension from the owners which was not granted, so the Philadelphia company pulled out.

To my knowledge this was the last underground mining done on the Red Cloud. However, in 1953 and 1954 the new owners of the Red Cloud group of claims asked the Defense Administration to do 6000 feet of diamond drilling on the property to develop strategic minerals (lead and zinc).

This program, in all probability, would have developed sulphide ore and a producing mine. However, the government engineers withdrew their support after less than half of the proposed work had been carried out.

Regarding old John Nummel's lost silver "outcrop" in the Trigo Mountains: the small area shown on the map has been prospected for 100 years, and I doubt if any outcrops have been overlooked.

My theory is this: the Red Cloud Mine and the Clip Mine contained some very high grade silver ore. Some miners "high-graded" some of this ore, intending to carry it down to the Colorado River and transport it by boat down river to Yuma. For some reason they changed their plans and abandoned the ore near the trail. Years of desert climate and torrential rains probably shifted the stolen ore, and when Nummel stumbled onto it, it appeared to him like an outcrop.

One last observation: the Red Cloud property just awaits someone to develop a paying mine in an ideally located area for year-around operation. There are 40,000 tons of developed oxidized ore above the water level. This water is a distinct asset, for there is enough of it for milling purposes. In fact, it is the only water in the district except the river.

LLOYD C. WHITE
Berkeley, California

Furry Landscape Artists . . .

Desert:

Our home is an oasis in the Nevada hills, surrounded on all sides by sagebrush, juniper and pinyon pine. Until the recent installation of a good high fence, it was quite common to awaken in the morning to find deer eating the vegetables and flowers in our garden. Occasionally bobcats and porcupines would pay us visits. Other wild animal guests were rabbits and squirrels.

Last summer we were annoyed by an unusual number of squirrels digging up our tulip bulbs. Since it had been a very dry season, we supposed they were storing the bulbs for winter food. The usual crop of pine nuts had failed completely.

Imagine our surprise and delight when spring arrived and we found no less than 75 lovely tulip blossoms out among the sage and pinyons, "planted" by our little animal friends.

F. THOMAS
Pioche, Nevada

Memories of Columbus, N. M. . . .

Desert:

Susan Jordan's "Memories of Broad Horizons" in the May issue brought back some memories of my own.

I went into Columbus, New Mexico, on the back of a motorcycle in 1916. The driver was a newspaperman from El Paso

and we drove from that city to Columbus after receiving the news that Pancho Villa had attacked the border village.

I still have scars on my legs from the falls we suffered on that rough road. What a mess things were in that day.

I take my hat off to Mrs. Jordan for learning to love the strange desert.

W. A. GRAY
Imperial, Calif.

Broad Horizons . . .

Desert:

I found "Memories of Broad Horizons" by Susan Wilshire Jordan (May '59) especially refreshing.

It brought a welcome poetic lilt to the bare harshness the desert too often presents. I hope the author can contribute more.

JOSEPHINE DUNLAP
South San Gabriel, Calif.

Higher Than Whitney? . . .

Desert:

There is a rumor current in this area that Navy scientists have found White Mt. Peak in California is slightly higher than Mt. Whitney. It is said that everyone in Bishop knows of this. The Navy, according to the story, has not published the information because it would necessitate the revision of all existing maps and possibly cause confusion in other ways.

I feel that the information, if true, should be published.

Efforts are being made to have a national park created in the White Mountains to preserve the ancient bristlecone pines found

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By **BENN KELLER**, manager
Ford Desert Proving Grounds
Kingman, Arizona

Cooling System

All modern cars are designed to tolerate normal driving habits in the high summer temperatures encountered in the Southwest desert country. But, remember, your engine cooling components must be in a good state of repair since in many cases, some may be taxed to their maximum designed capacity. Fan belts should be tight.

The coolant system should be free of sludge, scale and anti-freeze of any kind (either alcohol or permanent type). While manufacturers of permanent type anti-freeze rightfully claim that their product, when mixed with water in the proper proportion, will raise the boiling point of the coolant (highly desirable), they do not advertise the fact that the automotive engine runs somewhat hotter with the anti-freeze-water than it would with pure water. Be sure that a free flow of air through the radiator core is not hampered by a collection of leaves, bugs and dead birds plastered on the frontal area of the radiator.

in that area, and if White Mountain Peak is indeed the highest mountain in the original 48 states, it should be included in that park.

I am inclined to suspect that the Navy fears that if the fact about the true elevation of the peak became known, their research operations there might be jeopardized to some extent, or there might be some public disapproval of their appropriation of the area. I see no reason why the peak could not be included in a park without interfering appreciably with Navy activity there.

FREDERICK E. BOYER
Westend, Calif.

(According to Nello Pace, professor of physiology and operations director of the White Mountain Research Station, the "White Mountain is higher than Mt. Whitney" claim is an old saw. The U.S. Coast and Geodetic Survey's altitude determination in 1950 revised White Mountain's altitude upward four feet from the 1913 measurement—but the mountain is still 250 feet below Whitney's 14,495.811 feet. —Ed.)

Mexico—50 Years Ago . . .

Desert:

"Touring Mexico for Minerals" in the April issue brought back memories of my three years' residence in that Republic 50 years ago. I spent from days to months in practically all the districts mentioned by author Mary Shaub. I found the Mexican people, as she did, very hospitable, helpful and courteous to foreigners who had a polite approach.

She mentioned the aqueduct of Zacatecas as being beautifully restored. Looking at the massive stone piers and many arches, one would imagine that its carrying capacity was large—but there was only a burnt clay pipe four or five inches in diameter embedded in mortar running along the aqueduct's top. For a short time each morning, water would flow through the pipe to a "fountain" in the plaza from which it would be quickly dipped by the waiting group of women. If the water was tardy in arriving, the women would be two and three deep—awaiting their share of the precious fluid.

F. W. SEWELL
San Mateo, Calif.

Books for Parker Indians . . .

Desert:

My husband recently made a trip to Parker, Arizona, and brought back good news of the progress the local Indians are making in farming, housing and other improvements on the reservation.

They have built a library, but cannot, at present, stock it with books. Since they are a people anxious for improvement, education and reading recreation, we wonder if any of your other subscribers would consider making book donations suitable for their library.

Books should be sent to: The Colorado River Tribes Library, c/o Mrs. Agnes Savilla, Poston, Arizona.

MARY R. HANNA
San Bernardino, Calif.

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MINES and MINING

Grand Canyon, Arizona . . .

One of the few mines within the boundaries of the Grand Canyon National Park plans to ship 400 tons of high grade uranium ore to mills during the 1962-66 Federal U-ore purchase program. Because the National Park Service will not permit dumping in the Canyon, waste as well as the ore itself is being removed by the Western Gold and Uranium Corporation. The company plans to reach its production goal by next October if the mills can take this amount of ore flow, a company spokesman said. Tuba City receives most of the ore now mined. According to geologists, Western Gold's uranium ore was deposited in a brecciated pipe, created by an ancient volcanic explosion.

Grand Junction, Colorado . . .

U.S. uranium miners have until July 31 to file notice with the Atomic Energy Commission of established uranium ore reserves. Failure to file will prevent miners from selling ore to privately owned mills delivering concentrates to the AEC between March, 1962 and December, 1966.

Portola, California . . .

The famed Plumas Eureka Mine—producer of \$100,000,000 in gold ore—is now a California state park. The land was deeded to the state by Col. and Mrs. C. A. "Bert" Lundy. Soon after the '49 gold rush, 200 stamp mills operated in this district.

Salt Lake City . . .

The cobalt mining industry will be the next "victim" of the Federal government's domestic strategic ore policy, predicts Robert W. Bernick, mining expert on the staff of the Salt Lake Tribune. "There is, to date, precious little indication that the miners of cobalt will fare any better at the hands of the bureaucracy than have the liquidated tungsten producers, the starved mercury miners, the fluorspar people or the crippled lead-zinc industry," Bernick said. Facing ghost town status is the 1500-population community of Cobalt, Idaho, one of the nation's major cobalt producers. The ore from Cobalt is refined at Garfield, Utah, where the mill has an annual capacity of 3,000,000 pounds of cobalt.

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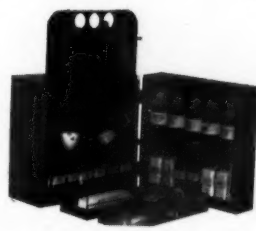
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AMATEUR GEM CUTTER

By Dr. H. C. DAKE, Editor of The Mineralogist

Agate Imitations

The claim has been made that moss agate is one of the few gems never duplicated by man. In general this is true, but not quite correct to the extent that we do not find (in the trades) fakes mixed with the genuine.

Collectors of fancy agates should be warned that most clever frauds have appeared on the market and have taken in even experts.

Some years ago the late Oscar Smith of Portland, Oregon, was taken, and Smith was an agate expert if there ever was one, having cut and handled millions of pieces during some 40 years in the shop.

One day a man came into the shop and offered Smith a most magnificent moss agate. In fact it was one of the finest Smith had ever seen. He was preoccupied with other matters and without much thought reached over to the cash register and handed the man a \$10 note. This was probably the first and only time in his long experience that Oscar ever went wrong on an agate.

Later, when he was mentally at leisure, he again examined the magnificent large cabochon, worth perhaps \$50 as a collector's piece. Somehow the stone seemed too perfect. The matrix portion of the agate was not familiar as being characteristic of any locality known to him. A little closer examination at the girdle revealed a most cleverly made doublet.

The manufacturer had gone to considerable work to place together two flat pieces of clear agate. Then in some manner he introduced between the slabs a few drops of some concentrated metallic solution. Gentle heat evaporated the chemical solution which was then deposited on one of the doublet halves in a most beautiful dendritic growth—too perfect as Smith noted.

The two pieces were then cemented together in the usual manner with colorless doublet cement. The edges finished and polished. There are numerous chemicals that could be used for this purpose, including colored ones. Also there are variations of the manner in which the "moss" could be introduced within the doublet. Perhaps I had best not go into detail here.

I merely wish to pass along the information that it is quite possible to "manufacture" agates, and in most presentable frauds. Any odd or "strange" agate cabochon should be closely scrutinized. Any doublet can be detected by simply placing it in some solvent, like acetone, for several hours.

Location Trends

Just a few decades past nearly all the larger supply houses were in downtown locations. Since then this trend has radically changed, not only in the gem and mineral supply field, but in all other lines. The huge shopping centers in the suburbs were unheard of only a few years ago.

In the gem and mineral field this seems especially notable. The hobbyist now is willing to get in the car and travel some distance to a place where he can be certain of easy parking, along with leisure time for shopping.

Most new firms that are now being established in this field invariably seek locations on the outskirts of a city, or even out on a main highway, places where parking is free and easy. Anyone contemplating opening a mineral or gem shop should give this matter of a suitable location serious consideration.

Diamond Test

In a recent club bulletin I read of the "cold" test suggested for identifying diamond—the gem is touched against a piece of solid carbon dioxide (dry ice) and if it produces a "squeak," it's genuine. Glass and similar imitations are said to produce no squeak or howl. This is an old method offered some year past. It has no reliability or standing in the gem trades or with gemologists.

The easiest and most reliable way of identifying a rough diamond is to hold it against a running grinding wheel, dry. If dust flies from the wheel it is likely to be the real thing. Press down hard, if it's a real diamond you may wear out the entire grinding wheel without any material effect or visible wear on the diamond.

For fear of chipping (not wear) I would not advise this rough and ready test for a facet cut diamond. However, by using a small grinding wheel and carefully applying the test at the girdle, it may be used. Or better yet hold a small silicon carbide wheel in hand then apply the stone in question in a scratch test.

For 25 years I have had various people bring and send me rough stones to be tested as diamond, and have yet to see a rough diamond turn up. Invariably the water worn stone is colorless quartz, or occasionally topaz. In thousands of pieces examined over the years I am still waiting for the diamond to appear. Nor have I ever heard of a stray diamond appearing in these lots of stones offered at low prices, and stated to have been removed from "old jewelry." That man Barnum is still correct.

Fluorescent Halite

A number of fluorescent minerals are subject to change when heated, even at low temperatures. The heat treatment of changes in color of some gems is well known.

Howard Pate of the Fluorescent House at Branford, Connecticut, reports that he heated some of the well known fluorescent halite from Amboy, California. The material lost its fluorescence completely. The specimens had become damp by moisture absorption, and they were placed in a low heat oven, not over 300 F.

The cause of this could be due to a number of factors. The halite could have lost its activator, if same was a substance like a crude petroleum. But more likely the cause lies in a re-arrangement of the molecules in the halite. This is often the cause of color change in the heat treatment of gems.

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BOOKS OF THE SOUTHWEST

ANOTHER WRITER HITS THE BAJA TRAIL

Baja California, Mexico's finger in the Pacific, is a relatively healthy place with some fine desert air along the middle stretches of the peninsula, and cool clear sea breezes along the fringes, but there's one infection that seems to hit any traveler who's been in Baja more than a fortnight. The disease is a virus that causes Author's Fever.

Latest to catch the bug is O. W. Timberman, who has written a 163-page diary about a trip he took by car to La Paz and the cape region. Mexico's "Diamond in the Rough"

is the title of the casual, unexcited report of a man-and-wife's meanderings in Lower California a year or two ago.

Travelers who have been along Baja California's dusty roads will recognize many of the friends that the author mentions in his book. No new light is shed on the history or archeology or biology of the peninsula, but perhaps Mr. Timberman wasn't looking for anything new in a land where so much seems so old.

Published by Westernlore Press, Los Angeles, "Diamond in the Rough" has 14 pictures spaced throughout the text, and sells for \$4.95.

SECOND EDITION OF MONUMENT VALLEY BOOK

Colorado school teacher Richard E. Klinck fell in love with Monument Valley's fantastic landscape long before he visited the place in person. It happened at a showing of a motion picture shot in the Valley. The breathtaking scenery acted as a magnet, and soon Klinck was a regular visitor. In 1953 he wrote a very handsomely illustrated book that reflects the special place he has in his heart for Monument Valley.

Recently, *Land of Room Enough and Time Enough* was reprinted in a second edition. Neither burdensome or buoyant, this book makes easy reading for the lay reader with a yen for travel. There are chapters on the Valley's past, present and future, and on its people, the Navajo herders and Harry and "Mike" Goulding, traders to the Navajos.

Published by University of New Mexico Press, Albuquerque; 46 photographs; bibliography and index; 136 pages; \$6.

GROWING UP ON THE NAVAJO RESERVATION

"... I was thrilled to think of the freedom this new life promised. No more school—Mother would have to teach us now. No dressy clothes, no duty calls and tiresome hours sitting in church..."

These were Billie Williams Yost's thoughts when, in 1914 as a girl of seven, she made the 45-mile trip from Winslow, Arizona, to the trading post on the Navajo Reservation that her father was going to run.

For 15 years the Williams family lived at Red Lake in splendid isolation. Growing up in such an environment was bound to produce many unusual experiences, and the most outstanding and interesting of these episodes make up the chapters of Mrs.

Yost's book, *Bread Upon the Sands*. Only one example: she witnessed a medicine man pass the death sentence on the second-born of minutes-old Navajo twins, in accordance with ancient belief that duplication in any phase of life is an offense to the gods.

The record of Billie Yost's childhood has much more value than the pleasure it affords to the reader. In a world moving toward the pole of conformity, more obviously seen in young people, Mrs. Yost's experiences are refreshing. They smack of the freedom she anticipated on that first ride to Red Lake. This precious emancipation was to her what fertile soil is to a young seedling. The thoughtful reader will envy Mrs. Yost's outwardly unembellished but inwardly wealthy young life.

Published by Caxton Printers, Caldwell, Idaho; half-tone photographs; 245 pages; \$5.

Books reviewed on this page are selected as being worthy of your consideration. They can be purchased by mail from Desert Magazine Book Shop, Palm Desert, California. Please add 10c per book for postage and handling, also four percent sales tax on orders to be sent to California. Write for complete catalog of Southwestern books.

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- 1 can peas and carrots
- 1 medium onion (cubed)
- 2 stalks celery (chopped)
- 3 cups potatoes (cut in square-inch cubes)
- 1 teaspoon salt
- 1/2 teaspoon pepper

Place all ingredients in large kettle or Dutch oven, add enough water to cover, and cook until vegetables are tender. Add water if it boils away.

—Ada Coupe, Jerome, Idaho

SAVORY BARBECUE BREAD (serves 4)

- 1 loaf sour dough bread
- grated Parmesan cheese
- onion or garlic salt
- margarine
- paprika

Slice bread, spread slices with margarine. Sprinkle with cheese, onion or garlic salt and a little paprika. Replace slices into loaf, wrap in foil paper. Place over coals on barbecue grill, turning once. After 10 to 15 minutes, remove from coals, unwrap and serve directly from foil. Goes well with steaks or other barbecued foods. —Babe Aldrich, Yorba Linda, Calif.

SOUTHWEST NEWS BRIEFS

Killer Weed Poses Threat . . .

Santa Fe—New Mexico livestock raisers were alerted to a possible threat—white-flowered alfombrilla or carpet—which has been found growing three miles from the United States border south of Antelope Wells, N.M. The killer weed already infests 750,000 acres in the Mexican state of Chihuahua, and reportedly has killed 3000 to 4000 cattle there. It spreads over land afflicted by drouth and overgrazing.

Mummies Found in Cave . . .

Hermosillo, Mex.—One of the most important archeological discoveries related to the history of ancient cultures of Northern Mexico was made in a deep cave in the Sahuaripa region of the Yecora Mountains of eastern Sonora—30 perfectly preserved mummies estimated to be over 10,000 years of age. The 600-foot cave in which the mummies were found by a group of surveyors had been sealed with a huge rock. The mummies, dressed in jewelry and fine clothing, were believed to be priests and other high officials, probably of the Pima tribal group.

Indians Regain Land . . .

Santo Domingo Pueblo, N.M.—The Santo Domingo tribesmen won their "war" with the U.S. when the President signed into law a bill transferring 4.45 acres of government land back to the Indian pueblo in trust. The land was the site of a government school in the heart of the pueblo, and when the school was abandoned the U.S. wanted to put the land on the tax rolls. The Indians objected vehemently, declaring that such a move could result in the white man acquiring an "island" in the pueblo, a situation the Indians view as being intolerable.

Apaches Make Tax Levy . . .

San Carlos Reservation, Ariz.—The San Carlos Apache Tribal Council has adopted a tax program to help balance the tribal budget. The precedent shattering move among Southwest Indian tribes includes a 1½ percent tax on the gross incomes of the two tribal stores, 20 percent tax on the net profits of the tribal herd and farm, and a 2½ percent tax on the gross sale price of all cattle sold.

Pyramid Land May Be Leased . . .

Nixon, Nev.—The Pyramid Lake Paiute Indian Tribal Council is considering a proposal to lease 7000 acres of land along Pyramid Lake's south shore to private enterprises. The proposed lease call for development of the lake as a resort area including commercial, residential and recreational facilities, the *Nevada State Journal* reported.

Largest Indian Hospital . . .

Gallup, N. M.—A \$3 million contract has been awarded by the Public Health Service for what will be the largest Indian hospital ever built by that agency. The 200-bed facility will be located at Gallup. It is designed as a regional medical and referral center to serve 81,700 Indians living on or near the Navajo Reservation in Arizona, New Mexico and Utah.

Popular Resort Closed . . .

Saltair, Utah—The Utah State Park and Recreation Commission—brand-new owners of Saltair, historic fun spot of Utah and a tourist attraction for more than six decades—announced it had failed to find a concessionaire to operate the resort without a state subsidy, and consequently Saltair will not be open this summer. The facility was given to the state last January by Ashby Snow, president of the Salt Lake, Garfield and Western Railroad. The Park Commission has no funds with which to provide a subsidy.

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AMATEUR FOSSIL HUNTERS WIN EXPERT'S PRAISE

Berkeley, Calif.—The chief curator of the University of California's museum of paleontology had some kind words for the amateur fossil hunters—a group of hobbyists who periodically come under attack by scientists and conservationists.

Said Dr. Sam Welles: "Serious amateurs have often turned up important finds by combing fossil-bearing areas during periods when the professional paleontologist is busy with painstaking laboratory work on fossils already collected."

One of the most important things for an amateur fossil hunter to do, Welles pointed out, is to make contact with a local museum or college expert and work along with him. The professional paleontologist can tell the amateur where to go and what to look for. In this way, Welles feels, proper care can be taken of a significant fossil find with a view to preparing the specimen for museum display.

PICNIC ISSUE STALLS OBSERVATORY NEGOTIATIONS

Tucson—Arizona's Papago Indians don't think much of the white man's picnicking habits, which doesn't come as a surprise to those among the whites who try to keep the outdoors litter-free.

While negotiating the lease agreement with the National Science Foundation and the Association of Universities for Research in Astronomy for the land atop 6875-foot Kitt Peak, part of the Papagos' huge southern Arizona reservation and proposed site of the National Astronomical Observatory, the Indians balked at the idea of a picnic area to facilitate observatory visitors, reported Inez Robb in the *Phoenix Gazette*.

The Papago Tribal Council gave in only after the white negotiators promised—in fine print on the lease agreement—that the picnic area will be regularly policed.

Besides observatory buildings, there will be an Indian museum on the mountain.

Hard Rock Shorty of Death Valley



Hard Rock Shorty watched the party of rockhounds pass out of the Inferno Store and mill around the drive, stooping now and then to pick up a pebble, examine it, discuss its merits, and then drop it back to the ground.

"Findin' anything good?" Hard Rock asked one of the rockhounds nearest to him.

"Well, not here—but, I think we picked up lots of promising stuff in the pass coming over. We'll have to wait 'til we get home to see if it'll polish or not," answered the genial rockhound.

"I heard tell o' thet 'spensive equipment you boys use nowadays to polish up these here rocks. Wern't always thet way," Shorty said as he knocked out his pipe.

"I 'member onst we had a feller come out here name o' Lancaster Mike," he continued. "Ol' Mike'd pick up rocks, lick 'em to see if they wuz agona polish, an' then he'd put some in his bag and chuck the rest away."

"This disgusted Mike. Not the lickin' part, mind you—but

never really knowin' which rocks wuz good and which wuz bad wuz what got his goat—'cause lickin' alone weren't tellin' him these things. He wuz doin' a lot o' totin' fer nothin'.

"So one day he ups and goes to Bishop and has the dentist there ream out all his back teeth and fill 'em with some rough diamonds thet he'd picked up years before in Afriky. With a full set o' these fillin's he got so he could gnaw the rocks right down to th' shape he wanted—and if the insides wuz purty, he'd tote 'em back to his cabin.

"Hear tell he wuz thinkin' o' havin' his mule's teeth done up th' same—only with grit fillin' so the critter, who wuz always chewin' tabacker, could chew them good rocks down to a nice polish while Mike hunted and gnawed ahead of 'im.

"Wal, th' dentist wuz fixin' to charge plenty fer those big mule teeth, an' Mike he called the whole thin' off and took himself a job with a loggin' outfit up in Oregon."

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Mogollon Field Trip

By JAY ELLIS RANSOM

THE MOGOLLON Rim is Arizona's great primitive frontier wilderness — a magnificent east-west hogback extending for more than a hundred miles through the eastcentral part of the state, separating the Colorado Plateau to the north from the more broken and irregularly assembled country southward.

This sandstone and limestone escarpment breaks sharply on both sides, so that the nearly level roadway along the length of the Rim provides frequent and tremendous views over tens of thousands of square miles of forest and mountain. The actual rim of sheer cliffs hundreds of feet high faces south. The western end of Mogollon becomes the Tonto Rim overlooking the primitive fastness of the famous Tonto Basin immortalized by Zane Grey.

Today, the Tonto and Mogollon country is mostly noted for its big game, fishing, log cabins, isolated ranches, forests, streams and azure gem-like lakes. It is a land for the outdoor minded — definitely not a country for the city motorist unaccustomed to mountain or back-country dirt road driving.

Before entering Mogollon, my daughter Alix-Gay and I pulled into the highway maintenance station west of the small town of Show Low for information on the Rim road.

The foreman looked over our gear—which included a 1000 pound camp trailer—and shook his head dubiously.

Wilderness. Ho!

"It's rugged in places, and the elevation averages more than 7500 feet over the hundred miles from Show Low to Payson," he said. "But, if you hold it down to 10 miles an hour, you shouldn't have any trouble. Be sure you have plenty of gas, water and oil. If anything goes wrong, you'll have to hike from 15 to 40 miles for help."

Good enough! The prospect of penetrating a little-known wilderness was inviting, and we were on our way.

From U.S. Highway 60 below Show Low, we turned off on the Rim road — indicated by a fine big highway sign. The first stretches were steep and twisting, littered with rocks which, fortunately for the tires, were rounded rather than jagged. Once on the summit portion of the road, the going was



better. Here the one-lane dirt road is fairly well graded.

At Mile 0.9 from the main highway, we reached the fenced boundary of the Fort Apache Indian Reservation, and followed beside it for the succeeding 60 miles.

Twilight caught us at the head of Hop Canyon. Making camp is easy when you pull your "home-away-from-home" behind you. We merely parked in a clearing alongside the road and settled down in the trailer for a warm comfortable night.

At sunup next morning we pushed on, pausing to read every road marker. Mileages are posted regularly by the Forest Service, but differ cumulatively and markedly from my speedometer which was certified as being exactly "on the button" just before I made this trip.

Good Performance

The trailer towed beautifully, even over the roughest places. Lunch was a quick bowl of steaming chicken soup, a sandwich and coffee — prepared in the trailer.

We met no traffic except two graders operated by Apache Indians. At 23.7 miles from the highway we reached a cattle guard where a dirt track angled north to Pinedale. Here were far vistas of forest, with the snow-laced peaks of the White Mountains blue-black with distance to the southeast. Behind Show Low and the intervening forested plateau glowed the reddish sandstone of the desert; beyond that—100 miles away—was the vastness of the Navajo Reservation. A smudge on the horizon marked Holbrook.

While prospecting along the roadside I discovered the first evidence of gem stone materials — many small pebbles of blood-red jasper, almost solid in color but with an occasional veinlet of chalcedony or white quartz. There was a good deal of fine quality yellow flint, some less colorful chert, and not a little ordinary quartzite.

At mile 27.9 we reached Deer

AUTHOR'S DAUGHTER, ALIX-GAY, AND FIRE GUARD WAYNE DUNCAN OF THE GENTRY LOOKOUT STATION EXAMINE AN EIGHT-POUND NUGGET OF GEM QUALITY RED JASPER PICKED UP FROM THE ADJOINING FOREST AREA.

Springs lookout tower. Genial Jack Smith, who has manned this tower 11 years and expects to do so until he has to retire, greeted us from the top of the 50-foot observation post.

"Come on up!" he invited, and Gay and I made the climb, entering the lookout by a trap door.

"You're sure lucky today," the mild-mannered forester said.

"After yesterday's storm, this is the most brilliant day in years!" Jack

The red jasper Jay Ransom found along the rough Mogollon Rim road in Arizona was only one of the many rewards this primitive, little-visited wilderness had to give him for his effort.

pointed south to Mt. Graham—a blue knob on the horizon 125 miles away.

"I've only seen Graham five times in 11 years," he said.

We resumed our journey, and the miles literally crawled under our wheels, although they seemed all too fast. We were averaging about eight miles an hour, what with frequent stops to prospect, to look at the blooms of bright wildflowers, or merely to get out of the car and drink in the pine-fresh odor of the forest. The sunshine lay warmly over the Rim, and all vegetation burgeoned in a wild abandonment.

At mile 47.0—almost exactly halfway along the Mogollon Rim—we came to the second lookout tower, designated Gentry Fire L.O. Altitude here is 7900 feet. The sudden appearance of large blood-red rocks and boulders along the roadside made me remember the rockhound part of my soul. In the brilliance of mountain sunlight these specimens glowed like Wizard-of-Oz gems.

But before I could get my rock hammer out of the car, we heard a "Halloo!" from the fire tower, the raucous squawk of a short wave radio, and some rapid-fire conversation. Wayne Duncan, tall and lean, climbed down from the tower to shake hands with us.

"You're my very first visitors this season," he said smilingly. "Come on in the cabin and register, and I'll fix up a pot of fresh coffee." He explained that this was his seventh year here.

Getting acquainted with this rangy forest-wise native Arizonan was easy, especially for my pretty daughter. While the coffee perked and Wayne entertained Gay with stories of the tragic Tewkesbury-Graham sheep and cattle war that had reddened the Mogollons with blood during the real frontier days, I loped back down the road after jasper.

First piece I picked up was an eight-pound nodule of the finest red jasper I have ever seen. Lugging it back to the ranger station, I asked Wayne if he knew anything about this material.

"Just another rock," he said.

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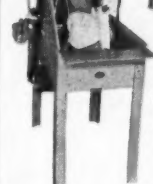
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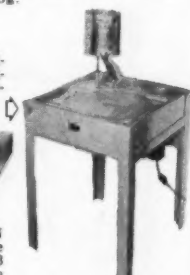
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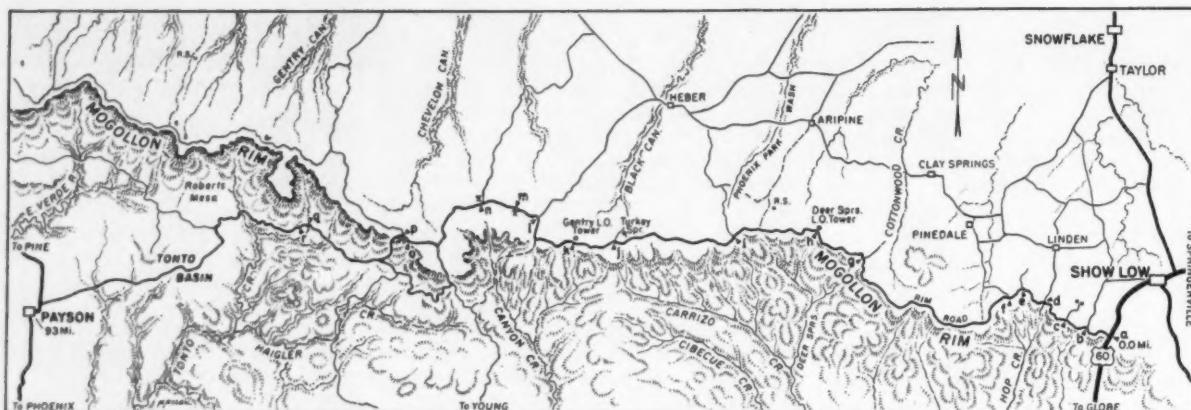


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MAP KEY: (a) 0.0 miles, Rim Road junction with U.S. Highway 60 four miles south of Show Low. (b) 2.2 Show Low junction. (c) 4.4 Junction right to Morgan Tanks. (d) 7.0 Hop Canyon crossroads into Reservation. (e) 9.5 Juniper Ridge crossroads and cattle guard. (f) 10.6 Bear Canyon Road right, six miles to Pinedale. (g) 23.7 Cattleguard and road to Pinedale; prospecting showed jasper, flint, quartzite. (h) 27.9 Deer Spring tower and cabin. (i) 34.9 Phoenix Park crossroads. (j) 43.3 Junction to Turkey Springs and Black Canyon. (k) 47.0 Gentry Fire tower—heart of brick-red jasper field. (l) 50.8 Junction to Heber, good graded road. (m) 51.9 Old logging operations, now manganese surface mine. (n) 54.1 Manganese excavation. (o) 61.4 Al Fulton View Point of Tonto Basin and Rim. (p) 62.0 Main junction to Payson; north fork of Y barely passable to standard autos leads to fishing and hunting primitive areas. (q) 69.7 See Canyon summer home area. (r) 70.0 Christopher Creek lodge, store and tavern.

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"There's lots of it scattered back through the forest on both sides of the road for quite a distance either way. I never heard tell it was good for anything."

I concluded that here must be a virgin field of this top-quality gem stone material. Before we returned to the car, I made sure Wayne knew something about jasper: "Just in case you get a rash of visitors later this season wanting to know exactly where to find it!"

North of the tower a half mile below the road is the old frontier Baca Ranch that figured in the grim war between the sheep and cattle barons. Wayne explained: "There are three old graves there where participants were 'planted' with their boots on. Shot in the back in cold blood!" Gay's eyes grew big and round. "From here on all the way to Payson there was

manhunting and killing, and many a lonely grave lies on either side of the Rim where a man was either bush-whacked or strung up to the nearest pine."

At mile 51.9 we entered an old logging slash area. On the south of the road a manganese mine recently had been opened by surface dredging. Farther on, at mile 54.1, we watched an operator load a truck with a powerful backhoe. He showed us the successive inch-wide veinlets of black manganese oxide penetrating all through the soft soil exposed by his surface mining operation, stating that this was "really high grade stuff!"

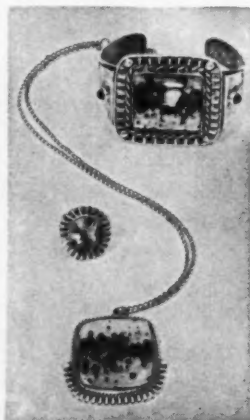
From that point we encountered many logging trucks, and the word is "Caution!" They travel fast, loaded or empty.

Cabins, summer homes and small ranches were more frequently seen now, and at mile 62.0 we reached the main Y junction. Here, the north fork continues along the Rim to descend eventually at Strawberry. This road is completely unmaintained, mostly used by area fishermen going to a few high-country lakes for exclusive trout fishing.

We took the south fork which leaves the Mogollon Rim by sweeping graceful curves over a broad gravel highway. Actually, this "super" mountain highway only lasted five miles, then returned to the usual forest road until by easy stages we reached rustic Christopher Creek lodge and store, the first since leaving Show Low, at mile 70.0.

Stopping for refreshments, Gay and I were entranced by two very hospitable old-timers, both chock-full of regional history.

Paul R. Ashby, with 11 children and 24 grandchildren, has spent 21



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years on the famed C.I. Ranch adjoining the lodge. The C.I. brand is known throughout Arizona and the West, and although the Indians burned out the French-Canadian homesteader, Christopher, twice, his third set of log cabins are still in use. Zane Grey's cabin, where he wrote *Under the Tonto Rim*, is only a few miles above the ranch.

Claude Mills runs the store, and is most hospitable toward visitors. "Mostly we get hunters and fishermen in here," he pointed out, "although in the summer not a few tourists drive up the 23 miles from Payson, either to see Zane Grey's old cabin, or to go on up to the Al Fulton View Point (our mile 61.4) for a look out over this wild country." (I didn't ask him if any of his customers drove the Mogollon Rim road just to pick up rocks.)

The rest of the way to Payson was mostly downgrade on a really decent well-traveled dirt - and - cinder road.

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CORONET GEM AND JEWELRY CO.
11139 1/2 W. MAGNOLIA BLVD., NORTH HOLLYWOOD, CAL.

Preliminary work is underway to straighten out many of the present curves in this route.

We felt rather proud of ourselves. We had made the Mogollon Rim drive with a house trailer—101 miles with not a bit of trouble.

Our gasoline consumption was 13.1 gallons—not very good mileage (7.7 m.p.g.), but we used second gear for fully 40 miles, and elevation ranged from 7250 to 7900 feet. The trip took 10 hours of driving and exploring time, including visits to two lonely fire lookout stations, and the discovery of what may well be one of the finest fields of jasper in the state of Arizona.

—END

PLASTER MOLDS FROM EMPTY MILK CARTONS

Empty milk cartons, in both the one quart and half-gallon sizes, make ideal forms in which to cast hard-to-hold rocks in molding plaster, making the job of sawing with a diamond blade much safer. It also allows complete slabbing, and if the rocks are small, more than one at a time can be cut.

In mixing molding plaster, always stir the plaster into the water to the consistency of buttermilk. If water is poured into the plaster, undesirable rapid setting is the result.

Pour about a half inch of the mixture into the carton, then working rapidly, place the rocks in the carton, leaving space so the plaster can flow around them.

The empty cartons have other uses: after rinsing, they can be filled with water, placed in the freezer and the resulting ice used on camping trips. Used milk cartons filled with bits of crumpled paper and twigs make excellent starters for campfires and charcoal barbecues. With their tops neatly cut off, cartons become splendid containers for baroques or small slabs, mineral specimens, etc.—Harry Zollars in the El Paso, Texas, *Rockhounds' The Voice*

SIMPLE TEST TO DISTINGUISH METEORITES

Meteorites generally are heavier than ordinary rocks, but this is not always or markedly true. Extra heaviness alone is not a conclusive test. Iron meteorites are extremely heavy, weighing almost three times as much as ordinary rocks of the same size, but stony meteorites are as a rule less than half again as heavy as ordinary rocks.

Best test for a suspected meteorite is to grind a small area on a clean carborundum wheel. A square inch or less is enough. As iron meteorites and some stony ones are very hard, it is best to select a small surface already nearly flat. If the grinding reveals a stony interior, look closely at the surface uncovered and see if any metal patches or specks have appeared. A small hand magnifying glass is a help in seeing these, but generally they easily can be noticed as a scattering of irregular silvery-appearing flecks.

If metallic iron occurs in a stony mass, the piece is almost certainly a meteorite. An all-metal meteorite (iron) when ground will show the fresh iron interior at once; in such case, try a magnet on the mass as a confirming test, as any iron meteorite will be attracted by a magnet.—Austin, Minnesota, Gem and Mineral Society's *Achates*

HIGHLAND PARK

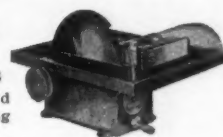
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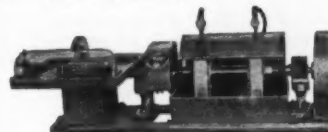
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THREE 1/3 acre building sites near Salton Sea with fresh soft well water and other utilities. Total price \$2900 for all three. Ronald L. Johnson, Broker, Box 162, Thermal, Calif.

80 ACRES near Lockhart, level, \$125 acre, 25% down. 20 acres Highway 395, level, north of Adelanto, \$150 acre, 10% down. 2 1/2 acres west of Adelanto, level, \$1495, 10% down. 2 1/2 acres Lancaster on paved highway, shallow water, level, \$2495, 10% down. Dr. Dodge, 1804 Lincoln Blvd., Venice, Calif.

CINDER BLOCK retreat in beautiful, growing Lucerne Valley. Modern plumbing, Formica kitchen, electricity—plus—three adjoining 1 1/4 acre lots for investment. \$8,500 total price. Terms. Some models less. Information, William Russell, Box 451, Lucerne Valley or Victorville 7-7493. In Pasadena call SYcamore 2-7101.

70,400 ACRE mountain ranch, top rated, beautiful, less than \$10 an acre. 800 cattle at market price. Myrlan G. Brown, Strout Realty, Box 96, St. Johns, Arizona. Phone FE 7-4334.

TEN ACRES, level, unimproved desert land on road. 3 miles to highway and Winnemucca Airport, Nevada. \$990. \$25 down, \$15 month. Owner, Henion, Box 5126, Pasadena, California.

● WESTERN MERCHANDISE

GHOST TOWN items: Sun-colored glass, amethyst to royal purple; ghost railroads materials, tickets; limited odd items from camps of the '60s. Write your interest—Box 64-D, Smith, Nevada.

● CAMPING EQUIPMENT

FREE CATALOG—World's finest lightweight camping and mountaineering equipment. Used on Mt. Everest, Himalayas, Andes, etc. It's expensive but absolutely unsurpassed! Gerry, Dept. 107, Ward, Colorado.

FREE CATALOG—4 comfortable ways to carry kiddies along fishing, camping, hiking, shopping. Keep little ones close out of danger. Drop a card now. Gerry Designs, Dept. 111, Ward, Colorado.

ROCKHOUND SHOULDER bags: specially made, nylon stitched, No. 8 white duck 12x12x5" with pockets and pick holder. \$4 postpaid. Alfred Lepore, 994 E. Holt Avenue, Pomona, California.

● MAPS

SECTIONIZED COUNTY maps — San Bernardino \$1.50; Riverside \$1; Imperial, small \$1, large \$2; San Diego 50c; Inyo, western half \$1.25, eastern half, \$1.25; Kern \$1.25; other California counties \$1.25 each. Nevada counties \$1 each. Topographic maps of all mapped western areas. Westwide Maps Co., 114 W. Third St., Los Angeles, California.

● MINING

ASSAYS. COMPLETE, accurate, guaranteed. Highest quality spectrographic. Only \$5 per sample. Reed Engineering, 620-R So. Inglewood Ave., Inglewood, California.

ULTRAVIOLET LAMPS, equipment, accessories for mineralights, prospectors, hobbyists. Free literature. Radiant Manufacturers, DM, Cambria Heights 11, New York.

DRY WASHERS custom built. Weight 5 pounds. Runs 25 pound sample in 5 minutes. Compact, sturdy, practical, reliable, and positive results on gold, cinnabar, etc., assured. Sold only with prospecting techniques demonstrated. Anyone can operate. Make your camping trips pay and have fun doing it. Write E. J. Hyde, Manhattan, Nevada.

WESTERN MINING News, monthly, for miners, prospectors, claim owners, \$2 per year. Sample copy 25c. Box 787, Sonora, Calif.

PROSPECTOR LOOKING for gold vein four feet wide that runs \$150,000 to the ton, needs grubstake of \$100 each month. Please write Joseph Beaudrie, 425 Elm Street, Reno, Nev.

WANTED: NEW or used, gold divining rod. Also interested in corresponding with someone who can locate gold with a divining rod. Jim Farned, 7356 Dinsdale Street, Downey, California.

MORE CLASSIFIEDS ON NEXT PAGE

TRADING POST-- (Continued)

GOLD AND silver indicators also the Mexican dip needle, also other instruments to locate gold and silver. For more information write Box 51, Plant City, Florida.

TREASURE, If you are looking for treasure or lost mines, and don't know how to find them, don't waste your time, ask us. 30 years' experience with our electronic instruments have proven that we are correct for location and depth. We do not sell instruments but work with you—percentage or fee. For more information please send self-addressed, stamped envelope. The Geotest Company, 1833 Marney, Los Angeles, California.

• MISCELLANEOUS

LIKE BEAUTIFUL large plants? Kitchen-aid formula 50c; stamped envelope. "Carol," 6465 Smith, Mira Loma, California.

LADY GODIVA "The World's Finest Beautifier." For women who wish to become beautiful, for women who wish to remain beautiful. An outstanding desert cream. For information, write or call Lola Barnes, 963 N. Oakland, Pasadena 6, Calif., or phone SYcamore 4-2378.

FIND FLUORESCENT minerals the easy way. New detector operates in daylight without batteries. Fits in pocket and eliminates dark box. Price \$12.50. Free brochure, Essington Products and Engineering, Box 4174, Coronado Station, Santa Fe, New Mexico.

MICROSCOPES, NEW and used, for professionals and hobbyists. Telescopes, scientific supplies. Write for price list. Peninsula Scientific, 2421 El Camino, Palo Alto, California.

HIGHEST CASH paid for old gold, jewelry, gold teeth, diamonds, watches, silver, rings, antiques. Mail articles today. Information free. Chicago Gold Refining Co., 6 E. Monroe, Dept. 575, Chicago 3.

WHEN YOU think of a squaw dress, think of the Buffalo Trading Post! Authentic originals, as colorful as the Indian lore that inspired them. Write for free brochure. Buffalo Trading Post, P.O. Box 697, 20115 Highway 18, Apple Valley, California.

DESERT LOVERS, collect sand. 50 specimens: \$5.50; 100: \$10; trial: 25c. Also plastic boxes for collections. Lor-Lew Design, P.O. Box 324, North Haven, Connecticut.

PLANT GROWTH MAY INDICATE MINERALS FOUND IN GROUND

Minerals in the soil may in some instances be located by the plant growth on the surface of the ground. This is the conclusion of two geologists who have made a rather exhaustive study of the subject on behalf of the California Division of Mines.

The studies were made by Donald Carlisle of the University of California and George B. Cleveland of the state division. Briefly stated, their conclusion is: "A buried ore deposit may provide to the soil above it an abnormal amount of the metal or metals it contains; in turn, the soil may provide a large amount of the same metals to the plant cover. The ore deposit may therefore, under favorable conditions, be detected by the abnormally high concentration of these metals in the plants."

This new technique of sampling, analyzing, and interpreting the plant cover is called biogeochemical prospecting. While it is true occasionally that certain species of plants will indicate the type of mineral in the soil, the more common use of this technology is to sample and analyze two, three or four different shrubs within a given area, although a single species growing widely over the area may serve.

The complete report is a 31-page paper cover booklet, Special Report

50, available from the California Division of Mines, Ferry Building, San Francisco 11, or at any of the branch offices of the Division, for 50c.

Cash for Contributions

\$15: Photo of the Month

Photos should be black and white, 5x7 or larger, and of a Desert Southwest subject. For non-winning pictures accepted for publication, \$3 each will be paid. Address: Photo Contest.

\$5: Poem of the Month

Poems must be original, previously unpublished and not more than 24 lines in length. Only desert subjects considered. Address: Poetry Contest.

\$2: Recipes of the Southwest

Recipes limited to Mexican, barbecue or camp-out dishes. Address: Recipes.

* * *

Contributions cannot be acknowledged or returned unless postage enclosed.

Mail to:

DESERT MAGAZINE
Palm Desert, Calif.

DESERT QUIZ ANSWERS

Questions are on page 27

1. Panamint.
2. Verbena. Others are trees.
3. Smoki is an organization of white men. Others are real Indian tribes.
4. San Jacinto. Others are craters.
5. Kaibab. Others are dams.
6. Mead. Others are mountains.
7. Ocotillo. Others are cacti.
8. Kit fox. Others are birds.
9. Snowflake. Others are valleys.
10. Alamogordo. Others are deserts.
11. Jaeger. Others are professional guides.
12. Algae. Others are divisions in geologic time.
13. Peccary. Others are rattlesnakes.
14. Santa Fe. Others are parks.
15. Creosote. Others are lakes.
16. De Anza. Others are prehistoric ruins.
17. Salton. Others are ghost towns.
18. Walker's. Others are lost mines.
19. Dante's View. Others are trails.
20. Canteen. Others are rock specimens.

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DESERT MAGAZINE

THE DESERT'S MUSIC: Theme of the

DESERT SYMPHONY

By JAMES RHODES, China Lake, California

Cholla approaches the podium
And raps his hard baton.
The Joshuas warm their woodwinds
And the symphony is on.

Verbenas join together
In contraltos pure and true,
While lilies flip their petals
'Til their solo part is through.

Next, Poppies, not to be outdone,
Add fire to the song,

Then the unruffled ocotillo
Sings soft and true and long.

After intermission
Small lizards do their dance,
While turtles move in circles
Like dreamers in a trance.

So on it goes and will forever
To hear as well as see,
This flawless interpretation
Of the desert's symphony.

POEM OF THE MONTH

and

PHOTO OF THE MONTH

contest winners

Spanish troubadours like the one below lend an air of romanticism to the picturesque restaurants on the plaza in Old Town, Albuquerque. Mary Branham of Santa Fe took this photo.





By RANDALL HENDERSON

YESTERDAY THERE came in my mail, unsolicited, a beautifully embossed card—a credit card which would enable me to go to any of more than 5000 business concerns in the United States and buy merchandise and services simply by signing an IOU. It seems that my credit is good for everything from luggage in Bangor, Maine, to men's clothing in New Orleans and golf clubs in Seattle. And I can go into nearly any city in the land and get my meals and hotel lodging without forking up a dime.

I suppose I should be flattered by such generous faith in my integrity. But I am not. From my Scotch dad and my Quaker mother I learned that vanity should always be subordinated to thrift. The big organization which is sending credit cards promiscuously to people all over the country is not in business for fun. Somewhere along the line either myself or others will have to pay the overhead and profit of a new brand of middleman. And it all adds fuel to the flames of inflation—to the cost of living.

Maybe I am an old fogey, but the big debts which are piling up at all levels, from the U.S. Treasury down through states, counties, municipalities, and service districts to the individual families, frightens me. Debt for capital purposes is all right—otherwise most of the newly-married couples would have to pay rent or live in tents. But debt for expendable items such as summer vacations, a trip to Europe or personal luxuries that are not essential, just does not make sense.

As far as I am concerned Khrushchev and Mao Tse-tung are Public Enemies No. 1 and 2, but it is possible the Russians have one virtue. Today they are denying themselves both freedom and personal comfort in anticipation of the rosy tomorrow which Marxism promises them. Here in the United States we are borrowing from tomorrow to sustain the freedoms and luxuries we enjoy today. Only history will reveal which is the soundest policy. I do not know the answer, but I have always been glad, in my later years at least, that when I was a youngster my dad refused to allow me to have a bicycle until I earned the money to pay for it.

Much of the Great American Desert can never be used for the production of material wealth—for factories or mills or housing projects. The places where the water supply is limited, where the terrain is rocky and precipitous, and where the land holds no mineral wealth or agricultural potential—these areas will have little interest for the industrialist or the subdivider.

But almost without exception they do have other values—values measured in terms of peace and beauty and the opportunity for worthwhile recreation. It has been gratifying to note that all the desert states and many of the local communities are today taking steps to preserve some of these areas for the public. For as population increases and working hours are shortened there

will be increasing need for all the space available in which humans may rest and play.

Generally there is conflict when the agencies of government seek to set aside lands and resources for the benefit of the public. There are always selfish private interests to combat. There would be no Yellowstone or Yosemite or Grand Canyon National Park today if the private ranching, lumbering and mining interests had been able to block these acquisitions, or if there had been no men and women so dedicated to the public interest they were willing to fight for them.

We have such a hassle going on in my home community of Coachella Valley just now. Nine years ago California appropriated \$225,000 to reserve a sector of the Salton Sea beach as a state park. Although facilities are still very limited the popularity of the park has been astounding. During the winter when the Pacific beaches are overcast and cold, the water fans of the Los Angeles area load their outboard motorboats on trailers and come to Salton Sea—thousands of them every week end.

But unfortunately, there are a few small private holdings in the sector of beach reserved for park purposes, and some of the owners are seeking to block further expansion of the public beach facilities. It is the age-old conflict between private interest and public interest, and the public-be-damned attitude of the industrial barons of an earlier period is still alive. In the long run the public interest will prevail, but the private holders can make it an expensive victory to the taxpayers.

* * *

One week end not long ago I camped near the base of a great rock massif in western Arizona known as Kofa Mountain. For two days I was alone in a world where there was only peace and beauty—where Nature has created the perfect balance which invariably exists when natural elements have not been disturbed by the avarice of man.

Then I came back to civilization, to headlines and radio news of the cold war, of treachery in Tibet, of uprising and bloodshed in the Middle East, of crime and delinquency and death on the highways in our own fair land. I wished that I might go back into that desert wilderness where hatred and greed are unknown.

You will understand, then, why I am so devoutly interested in the passage of the Wilderness Bill—S. 1123—which probably will be on the floor of Congress by the time this issue of *Desert* goes to press. This bill would preserve approximately two percent of our federal domain in its natural balance—where humans may go for a renewal of faith and spiritual strength, but where there would be no real estate for sale nor trespass by those who would exploit for profit.

Human beings need something more than mere money and fun—something that can be found only in the peace and majesty of the good earth as God created it.

R. Brownell McGrew, artist of the scenes on this month's front and back covers

SUPERB CRAFTSMANSHIP" . . . "skill verging on the dazzling" . . . "astonishing mastery of form and lighting" . . . "over these canvases hovers the light of ghosts, possibly Rembrandt, Hals, Velasques" . . .

These are a few of the nice things art critics have written about R. Brownell McGrew and his work, examples of which are shown on the front and back covers of this issue of *Desert Magazine*.

McGrew was born in Columbus, Ohio, 43 years ago, but has lived all but the first few years of his life in California—near the great mountains and vast deserts that have so markedly influenced his dramatic painting.

He studied at the Otis Art Institute in Los Angeles under Ralph Holmes, and in the late 1940s received the Stacey Fellowship for a year's exercise in landscape painting.



R. BROWNELL MCGREW

THE STORIES behind the cover paintings, as told by the artist:

"By sheer happenstance, both paintings grew out of sketching trips made last year with my renowned friend, Jimmy Swinnerton.

"In the latter part of June, we loaded our gear and plenty of water into the car and lit a shuck for Box Canyon east of Indio, California, where we broiled through a glorious day painting one of the loveliest of desert offerings, smoke trees in heavy bloom. This became the canvas on the front cover.

"June can be a bit uncomfortable while standing in the sun all day over a hot palette, but the water and a delicious breeze off the Salton Sea ameliorated the pangs of creation, together with a noontime dash back to Mecca for a meal at Jim's favorite Mexican beanery.

"About two months later, Jim, Dick Getzlaff and I met in Cameron, Arizona, to take in the Hopi Snake Dances, a most colorful and intriguing ceremony where, unfortunately, it is impossible to make sketches since our red brothers take a decidedly jaundiced view of this sort of thing. Following the dances, we moved on into the stupendous world of Monument Valley and fell to work.

"One afternoon we drove northeast behind the buttes and turned into a pair of ruts that straggled off toward the horizon in a most inviting fashion. My two confreres were soon settled in the painter's customary work-trance, but being plagued with curiosity and a fiddle foot, I kept prowling down the dim road until my serendipity came through and the subject for "Home of Other Days" (back cover) lay before me. Lonely abandoned dwellings always start the

eerie wheels working in my mind, but in the context of the Valley's grand forms and grander spaces, the desuetude of this primitive shelter seemed almost tragic. One's thoughts wheeled endlessly round the people who had lived there and now are scattered into the limitless beyond, perhaps down that beckoning road I mean to pursue, *Deo volente*, next time."



"LATE IN JUNE"

Back Cover—

"HOME OF OTHER DAYS"

Artist McGrew captures the forlorn mood of an abandoned Navajo hogan in its spectacular Monument Valley setting.

